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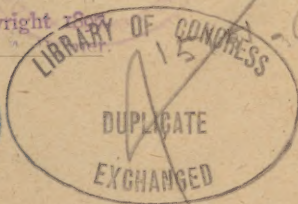
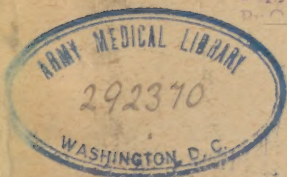
BY

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PREFACE.

This little volume deals with subjects of no little importance to every man, woman and child. It has been written with a great desire to make it useful in the work of physical and mental improvement. My aim is not so much to unfold new principles as to popularize those already established, and to show, to some extent, their practical application in health and disease.

These pages have been written in thoughtful earnestness, and if I shall succeed in awakening an interest in the great subject of natural and diseased life, I shall not have labored in vain.

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ANNEX
Hygiene, Pers.

THIS VOLUME IS AFFECTIONATELY DEDICATED
TO MY WIFE,
AUSTINE S. PALMER,
WHO HAS RENDERED VALUABLE ASSISTANCE
IN ITS PREPARATION.

LIFE.

“Life is the happiest gift of God;
And the human body is the best of Nature's hand-
iwork.”—*Hale*.

Life is the force causing the phenomena of organized beings; it is the power by which an organism exists. Dr. Draper says that life is “a self-conscious and immortal principle which animates this machine.” It is not an easy matter to define life, and nature is likely to keep the secret to herself. This formative force holds the thread from the first to the last point of life, and we know it only by its effects. There has been much investigation as to the source of life. One class of thinkers believe it to be the result of vital operations, and that it is to be explained upon chemical principles. Another class believe that the vital spark is a thing beyond our knowledge, and without the province of human reason. I believe that life is a supernatural gift, and is from God.

This organic life is perceived by its

results in every person. It gives us the power of self-preservation, and enables all animals to resist the power of noxious and injurious changes. It is this force that enables the living body to perform every process that is necessary to make a healthy individual. Every person is born with a certain amount of it, which is capable of increase or decrease, according as the conditions are favorable or unfavorable.

In the human body there are two kinds of forces which work against each other. They are called the vital and chemical, respectively. The vital or life force is that power which forms from a single cell, the entire body. Every thing we eat, drink or breathe, if in a perfect condition, is used by this force to better the condition of our existence. The chemical force is the cause of the decline of the body, and is the destroyer which produces any kind of change, from a state of health, to disease and death. Health, then, is a forced state of being, which consists in the maintenance of the proper equilibrium between the life force, which builds, and the chemical, which destroys. Wherever we find life, it is governed by certain conditions. As we have said, if they are favorable, it is supported and increased, and if unfavorable, it is decreased, if not entirely lost.

This will be illustrated by the possibilities of a kernel of corn.

A certain chemist requested an apt pupil to put together the elements of a kernel of corn, and prepare it for planting. After some experimenting, the pupil concluded that the elements were all right, but that something was lacking, and he soon determined that the something was the force, or life principle, that is received only from the Maker's hand. Had this student possessed the power to form this kernel, and had he planted it in rich soil, observing all its laws of growth, moisture, light, heat, cultivation, etc., it would have developed into a fine stalk, with possibly two large ears of corn. So, this little life force, under proper care, has been made to grow not only a great stalk, but to stamp many kernels with the same reproductive powers. Now if this same kernel were planted under unfavorable conditions, it might start and try its best to live, but, sooner or later, it would have to die, because it was not favored with the necessary conditions of life.

The conclusion is thus drawn that the life force is dependent upon conditions. It is not possessed by all persons in an equal degree. In some it is strong, giving health and great power of existence, while in others it is feeble, causing a

weak body, disease, and, eventually, death. It has been thought that this living force has a central seat, from which it sends vitality to every part of the body, but this is untrue. We find that each cell or structure has its own life within itself, and the power to use it, and to supply its place with another cell when it is gone. As is this *life principle*, so is the body, and it is beyond question that every influence has its effect, whether for good or evil.

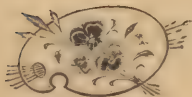
One writer says that the body is crystalized spirit. To every thinking mind, then, it will be easy to see that the better care we take of this formative force, the better we will be spiritually and physically. If we desire physical perfection, we must cultivate every condition that will conduce to health. We should not live contrary to the laws of life, but learn what they are, and obey them.

In treating disease we often find the life force so nearly gone that only a remnant is left of the once grand structure. After the earthy part of man was formed, God gave him the breath of life, which has come down through the ages as a great vitalizing and preserving principle.

In the beginning, man was made perfect in the image of his Maker, and that perfection is his heritage and should not

be allowed to deteriorate. It would not require much thought or effort to preserve this perfect condition, if, in the beginning, all our habits were correctly formed, so that no law of our being was disobeyed; the struggle against disease would not be so great.

In the condition called perfect health, all the processes of the body are unconsciously performed, we live without sensing our existence, and as soon as disease comes, we sense our unhealthy living and long for relief. When we consider that perfect health is a condition of perfect happiness, we can comprehend the importance of perfect living.



THE WILL.

God made thee perfect, not immutable;
And good he made thee, but to persevere.
He left it in thy power; ordained thy will
By nature free, not over-ruled by fate.

—Milton.

A great deal is being said today about "bull-dog tenacity, unflinching purpose, indomitable will," etc.; but we are bold to say that we doubt if the persons who go about using these terms so carelessly realize the significance of what they are saying. The strength that lies in the silent forces of thought, the subtle, intangible power called *will*, can be dilated upon ad infinitum. And yet they are familiar terms, every-day expressions, which still convey little of their true meaning to uncomprehending ears, for, surely, if a larger proportion of humanity's struggling mass understood the *practical part* this force plays in life's drama, a larger proportion would strive to develop this power, if they had it by nature, and to acquire it if they have it

not. Great powers may result in failure because of irresolution, and mediocre abilities attain the most brilliant success because of strength of will.

Will means character, which dies with its absence. One family will have no brilliant attributes, yet always be respected for their decision of character, and another will sparkle with talents galore, yet we do not value their opinion; their advice has no effect upon us even though good, and although the same line of arguments from one of stronger *will* might convince. Like Meredith's Lord Vargrave, their lives

"Though in all things so gifted and skilled,
May be yet but a *promise*, with nothing fulfilled."

There is no permanent excellence in the individual who, when the hour of temptation comes, has no will to resist it. Temptation is the crucial test of character. There is no merit in well doing if there is no temptation to sin. And yet this same coveted *power of will* may be a great blessing or a greater curse; combined with the powers of evil it has formed some of the worst characters of the world's history, it depends upon its relation to other qualities, whether it may be regarded as an unmixed blessing. A terrible determination to perform evil

deeds has at times seemed to conquer right and throw doubt upon the glorious truth, that good is ever stronger than evil, which has no reality, and is but a shadow. —

We would speak here of the habit of critical self-analysis, which when formed, is "a consummation devoutly to be wished." It is an obsolete idea today that all criticism of character is essentially hostile. We have come to study character scientifically, as we would play a hand at whist, for the intellectual pleasure of it, and when applied to self, it becomes of vital importance. All men have their weak points, and to know our own is to prevent other people from playing upon them.

In such analysis, the will power must ever rank as first numeral. Upon it depend all other traits and their relative value. In the course of such a self-examination we may exhume many unpleasant facts, but this is not the point to desist, but rather to continue unflinchingly. "Know, then, thyself; presume not God to scan. The greatest study of mankind is man." Too often it is neglected, this study of self, family, and especially children. The future of a child can be forecast with a tolerable degree of accuracy, in the ratio of a greater or less degree of will power. If it is

possessed of a strong determination, the never-give-up quality, it can safely be placed where its fortunes are controlled by its own efforts. If weak of purpose, it had better be allowed to run in a certain groove, where, for a said amount of labor it receives a said sum, and no demand be made upon it beyond its powers.

"I may fail now, but I shall *not* surrender; I *will* rise to the top; I *will* command success," are magic words that will accomplish wonders. A man who will see where his faults lie, and remedy them, can "climb the sunlight heights," but he who is entirely satisfied that the fault lies entirely with others, will remain "forever in the valley." He is stricken with the devil's palsy of self-approbation, and will never achieve anything worth the doing. He has no glimmerings that "knowledge is power," nor does he know the delights of a well-stored mind.

"Genius," some one has said, "is simply a capacity for hard work," for that *sustained, steady drive*, which is the real test of ability. A great many people go about the world bragging of the smatterings of somethings which they have done, and expecting to receive great consideration therefore, in utter ignorance of the sorry figure they cut as compared to

these real-in-earnest people who have moved mountains.

Gibbon said that "every person has two educations—one which he receives from others, and one which he gives himself." Upon this later topic we would dwell a moment. It is an unhappy fact that few, so very few, realize the importance of this matter of self-education. Great and essential as are the foundations of the early education, still greater and still more essential are the principles of the later education which every individual should give him or herself. First, he should know himself, that critical self-analysis which involves such a keen detection of petty defects and larger faults as well as a recognition of strong points, and how to make the most of them, then, having this knowledge, to possess or acquire the resolute will to rise to the situation; to control, govern, MASTER. . . "To be right in great memorable moments is perhaps the thing we need most wish for ourselves," said George Eliott. And great moments are the *sudden test* of long forming character. To be strong in the hour of bitter need, when the very life's strings seem strained, is to be strong indeed. At such times as this, there sometimes appears in quiet people, a reserve will power or force, which only sudden emergency can

call out, and which inspires to great and heroic deeds. This is never the product of a weak nature, but self-culture, which is its own reward, is its creative element.

"This above all—to thine own self be true,
And then it must follow, as the night the day,
Thou canst not be false to any man."

Yet another matter remains to be considered, and that is the physical strength which goes with the resolute will. It is of small use putting a man with a strong consumptive tendency to an office life in a crowded city, with badly ventilated rooms for a background. The will power could hardly stave off the breakdown which would be sure to come under such circumstances.

It has been said that "everything is possible to a man with a good digestion," and there is "more truth than poetry" in this statement. The person who starts out in life with defective digestive organs is heavily handicapped. They can do less work, and with greater effort, than one whose stomach is strong. Persons who are unable to sleep well are as irritable as dyspeptics. There have been a few instances of great men (notably that of Napoleon, who thrived upon four hours of sleep,) who have been able to get through an enormous amount of

work with no corresponding amount of rest, but the ordinary individual demands the regulation amount of "nature's sweet restorer" to preserve good health.

In diseases which are compatible with recovery, the influence of the will is as potent as elsewhere. It often makes the difference between life and death. "You must have a blister or you will die," said her physician to the Duchess of Marlborough. "I will not have a blister on, and I will not die," said the redoubtable Sarah, and she did neither. A strong motive to live, in reality keeps some people alive, while none at all produces a complete lack of resistance, which is fatal. The will power stands in some curious relations to the nervous system. In cases of imaginery diseases, the patient is sometimes highly intelligent, but a disorder of the will takes place, which in turn creates a bodily disease in which it finds expression. When the will is entirely in abeyance, chronic melancholy is the result, which, in a stronger form, is insanity. When the will fails, the battle is lost.

Mind controls matter to an extent that few people outside of the so-called Christian Scientists recognize, yet it is a common fact of physiognomy that the character is written on the face in letters

of fire, to him who knows how to read. Treachery lurks in the shifting, uneasy eye, about the lines of the irresolute mouth, or honor sits enthroned upon a lofty brow, and unflinching integrity closes the firm lips.

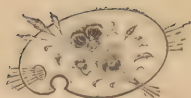
That hatred, jealousy, rage, grief and fear will swiftly cause indigestion, dyspepsia, headache, fever and derangement of the heart, is equally admitted. The reflection of evil passions or lovely thoughts upon the body is as sure as the sun shines. Who does not know that a mad fit of anger will cause fever, headache, hysteria? And who does not know that love and happiness are greater promoters of health than all the drugs in chrisendom?

Why does a conscientious physician prescribe, along with sunshine, flowers and fresh air, cleanliness and godliness, that these tiresome pessimists who are eternally chattering of disease, danger and death, be kept out. The breezy, cheerful doctor, whose eye beams with encouragement, and whose very presence inspires hope, works magic cures. The patient remarks: "I always feel so much better after Doctor So-and-So's visit; it does me good to see him."

If the English speaking people would accompany the handshake with an utterance of a cheerful thought instead of the

everlasting inquiry about health, health
would be more apt to stay by them.

"As a man thinketh so is he."



SENSIBLE ETIQUETTE.

"Oh, wad some power the giftie gie us
To see oursels as others see us."

Burns' modification of the golden rule as well as the whole strength of the divine rule itself, may be said to be the basic principles of all true politeness.

Manners and morals are closely allied, and a society where bad manners prevail will never be pervaded by a high moral tone. It is only the ill-bred who fail to recognize the importance of these truths. A writer has said that as savages know nothing of the virtues of forgiveness, and think those wanting in spirit who are not revengeful, so the underbred do not understand undue civilities extended to promote the general interests of society.

How often do we meet those people who have not the slightest comprehension of the nobility of nature which makes an instant apology for a conscious wrong an imperative necessity.

They proudly affirm that they would never "crawl" to any one, not knowing that it is to preserve the harmony of unbroken self respect that the individual makes the effort.

We have heard the small civilities called the "cheap bought grace of life," and what a delicate poetry does the grace of perfect breeding lend to the character of a friend, softening often the too rugged prominence of strong virtues, and making us forget great faults or petty foibles! If they be absent or dead we cast regretful thoughts back to them. The charm lingers over their memory like a faint perfume that refuses to fade. The memory of them will be ever

"Like a vase in which roses have once been distilled—

You may break, you may shatter the vase if you will,

But the scent of the roses hangs over it still."

The little amenities being born of love, human or divine, come next to it, and make life endurable and worth the living, often when there is nothing else. When we observe how unlovely, how unattractive, men and women can make themselves; when their conduct gives evidence of that want of self respect which alone leads men to rush in where "angels fear to tread," we will have suf-

ficient excuse, we think, for the following.

There is a class of people who effect to despise etiquette, and take pleasure in outraging its rules, nay even more, we are loth to admit it, but this class is not confined to the illiterate. We have in mind now, a man of splendid genius and great abilities, which would certainly fit him for high places, who is now, and always will be, held down simply and solely by his utter boorishness of manner, yes, and by his neglect, too, of dress if you please.

There are men, who, by sheer strength of intellect, will push their way, but their lack of culture in dress or manner is ever at the same time a millstone about their neck. Think of a man of gigantic brain, whose eminent position depended upon the vote of a number of men, being objected to, because he wore soiled garments, by an intellectual pigmy, who dwarfed into insignificance beside him. Yet we have known such a case in actual experience.

It is not our purpose to write upon the details of social laws. Good books upon etiquette are accessible in any book store, and, standing in the light of these last illustrations, who shall dare to say they go for naught. Of course we are aware that there is an opposite danger. Men

of vile lives, low principles and black hearts, can often impose upon society with the veneering of a polished manner, but we make a nice distinction here. There are two classes of good manners. One springing entirely from a love of the world; a desire to be in "good form," that one may mingle with a certain set. The other springing from the divine wish to make others happier; to reverse the sad story of "man's inhumanity to man;" to do good unto others even as we would have it done unto us.

The people who possess this latter class of good manners, recognize the fact that a courteous bow, a kindly smile, a warm handclasp, will sometimes brighten a whole dark day, in some life where there is much rain and little sunshine. They know, also, that slanderous tongues, biting sarcasms, unjust criticism, the judging of lives they know not of, are not attributes of the Christ, whose God-like adjuration, "Let him among you, who is without sin, cast the first stone," scattered abashed the crowd of scandal-mongers, and will ring through all eternity to the triumph of infinite charity. The first mentioned class are well known. Their good manners sit uneasily upon them like a new garment, they are easily caught off-guard, and their company smiles and attitudes de-

ceive no one. An auther has said that "women may be as good as they ever were, but their manners are indisputably decaying."

The old theory of the "divinity that doth hedge a king," was not more high than the divinity that should hedge a refined and pure woman. Have you never met a woman to whom a man unconsciously raises his hat, the act being perhaps as involuntary as anything he ever did in his life? This is due to the atmosphere of magnetic, unruffled ladyhood with which she encircles herself. The sway is purely spiritual as are all things that are lasting. If every woman could realize the power she could attain by the demanding of a certain amount of deference from men (a tax paid to her sex as it were), she would never willingly forfeit that privilege. Her influence would be felt from the most well-bred gentleman, to the roughest workman. All alike would yield her the respect she asks for. What is the use of springing to open a door, place a chair, or raise a fallen handkerchief for a woman who is just as well pleased if you do none of these things?

There is a lesson, we believe, for all thoughtful women in this. Life is made up of details. The strong mind can afford to descend to them; it is only a

weak one that fears to be narrowed by them. The man or woman who really loves beauty will cultivate it in the smallest thing around them. The study of the beautiful rightly undertaken is the study of God, and by its cultivation we approach Heaven.

Every human being should cultivate good manners; they are an essence of the beautiful, and consequently of God. "Self-denial is the attribute of the Christian, forgetfulness of self, that of the well-bred." Both are reflections of divinity. The more religion a man has the higher his moral character is developed, and the more polite he will spontaneously become, for true religion teaches him to forget himself, to love his neighbor, and to be kindly even to his enemy.

Upon physical perfection depends all that is perfect in the mental. The perfect body, perfectly controlled and tempered with right living, produces the perfect mind tempered with right thinking and crowned with wisdom. From this course of reasoning we deduct the fact that hygiene is an indispensable requisite to the higher education of the people. Ignorance of it is fatal to all alike.

The physiological motto is: Educate a man for manhood, a woman for

womanhood, and both for humanity. In this lies the hope of the race. Then theories will not be simply theories, but the strong body can execute what the strong mind plans, and the flesh will not be weak where the spirit is willing. We can honestly say that we may

“ Do noble things, not dream them all day long,
And so make life, death, and the vast hereafter
One grand, sweet song.”



GENERAL THOUGHTS.

It should be well understood by all that the bowels and kidneys are the organs intended by nature for the removal of the refuse and waste of the system. No person can enjoy good health who does not see that these organs properly perform their functions. A healthy person, whose digestive organs are strong, should have a free discharge from the bowels once in twenty-four hours. There are some corpulent people who find two necessary in that length of time in order to avoid a dull headache and a sense of lethargy and oppression. There are exceptional cases of individuals who find once in forty-eight hours all that is necessary, but it is unsafe for anyone to allow a longer period than this.

One of the strongest natural causes of disease is constipation of the bowels, which may be occasioned by causes which are manifold. Highly seasoned and indigestible food, much fat or but-

ter, warm bread, hot drinks, spirituous liquors, astringent wines, sedentary habits, lack of exercise, indolence, irregularity of habits, late rising in the morning are numbered among them. Another very common cause is the habit of neglecting nature's call, which may prove fatal. No matter how absorbed one may be in business or pleasure, this matter should receive immediate attention and at a regular time. The dire and divers evils which arise from constipation are too numerous for mere mention, even within the limits of this chapter. Flatulence, no appetite, restless sleep, bad dreams, swelling of the bowels, headache, debility and convulsions constitute a few. The evil should be overcome either by proper discipline or proper medical treatment.

Fully as important as the above mentioned difficulty is an irregular or insufficient action of the kidneys. The kidneys remove from the blood those effete matters which, if permitted to remain, would speedily destroy life.

A total suspension of the urinary discharge will destroy life in from thirty-six to forty-eight hours. Under no circumstances should this derangement be trifled with, nor should there be any delay in consulting a physician.

The powerful sympathy existing

between mind and body makes it necessary that the conditions of mind be properly attended to.

The brain, like the muscles of the body, must have exercise to remain healthy, but judicious and prudent exercise. No known disease works such terrible and speedy destruction to the human body as uncontrolled and violent human passions. Love, one of the most powerful of these, and designed by the Infinite Wisdom to be productive of blessings and happiness, can by perversions of fear, jealousy and anxiety, be the source of terrible mischief to the brain and nervous system. The abnormal state of the brain in this case may undermine the constitution to such an extent as to produce fatally, acute or hopelessly chronic diseases.

Fear or dread is a powerful mental factor. There are instances on record where a terrible fear has produced immediate idiocy, changed the hair to sudden whiteness, or it fell from its roots, leaving the head bald. During an epidemic of some contagious disease, there can be no doubt that some people suffer and die with symptoms of the disorder, who in reality do not have it at all.

Anger is apt to be of sudden origin in excitable people, and exerts a most po-

tent and damaging influence upon the system. Violent anger will produce the rupture of a blood-vessel, convulsions, epilepsy, apoplexy and sudden death. To overcome a naturally, ungovernable temper requires a most resolute will, but it can be done, and the individual making the effort will be doubly repaid in the beneficial results.

A person who is possessed of absolute control and dominion over themselves is possessed also of an ease and power that is utterly unknown to fractious natures—a power over others as well as themselves which may be productive of unlimited good. No attempt should ever be made to settle a dispute while in an irritated condition. Reason is practically in abeyance and the attempt only makes matters worse. Get away from the scene of contention as soon as possible; change the circulation by sitting if you are standing, or rise and walk about is a better way, if you are sitting. A drink of cold water is often a help, and people of inflammable temperaments should avoid the use of intoxicating drinks and stimulating foods. A mother can never govern her child wisely unless she first governs herself, and having done that she will do well to train and influence the child and not govern it at all.

Grief is more a passive than an active state and is less a question of will than the other. We cannot help grieving, but when it is observed that it is producing a slow but none the less sure undermining effect upon the constitution, it should be controlled to the greatest possible extent. It exerts a debilitating influence upon the whole system and often occasions sleeplessness, loss of memory and premature old age. Grief is a most difficult passion to overcome, and all possible aid should be given a patient in struggling with it. The mind should be kept diverted with cheerful conversation, pleasant books, congenial companions, etc., and if possible, travel, involving change of scenes, atmosphere and mode of life.

"Joy seldom kills," is an old saying and a true one. It rather exerts a sanitary influence upon the body and causes an increased action of the various organic functions. Sometimes, however, especially when preceded by great depression, it approaches hysteria, occasioning wild laughter, tears, etc. In this case a good effect may be obtained by arousing an opposite emotion, such as fear or anger, dashing cold water in the face, causing physical pain, etc.

The foregoing are the principal emotions which exert the most powerful

influence upon the human body, but an excess of any passion will impair the mind and through it the physical energies. Health and happiness depend upon keeping the passions under rigid discipline, and by persistent effort this can be accomplished. Too little thought is given to children in the cultivation of their emotional natures. It is less trouble to require them to obey without rhyme or reason or attempt at explanation, and many parents unhappily pursue this method without considering the impression they are making upon young and tender minds. Children are generally very sensitive and deeply alive to injustice, unkindness or neglect, and a young mother will find that an hour spent in reasoning with her child, instead of compelling by brute force, is, perhaps, the most valuable hour of her life.

A word now concerning occupations in life and their choice. A person, whose trade or profession requires them to be much in the open air, has decidedly the advantage of one whose life is necessarily spent indoors or bending over desks, and this fact should be remembered in advising young people. The popular mistake is to "find something easy" for those who are delicate and weakly, and "something easy" gener-

ally means a confined position indoors. No greater error could be made. Nervous temperaments especially should have squarely the opposite. They frequently thrive and gain strength and nerve force in the open air, when they would certainly go down otherwise. Those people, who are blessed with robust and healthy constitutions, are much better calculated to stand sedentary habits and a life of close mental application. In any event, if the last mentioned life must be followed, it can be rendered much less prejudicial to health by all possible precautions, such as good ventilation, temperance, cleanliness, attention to diet, baths, bowels, etc., and all the open air exercise that is possible.



SENSATIONS.

Sensation is that condition of the mind by which it is possible to receive an impression, and is a function of the brain. Through the brain we are made conscious of our existence. As the brain is, so will be our sensibility. If we have a healthy brain with all of our bodily functions working in shape to keep it so, our sensibilities will be perfect, and any impression made upon us will convey the correct idea. I have often seen a slight disease of the brain or nerves be the means of conveying the wrong information, and trouble follow. Any nerve of the body may become diseased and cause a local defect in the system, which should be treated as such, even though the brain is affected by it.

From the above statements it will be observed that the brain or nerves may either one become affected, making a general as well as a local condition. I wish first to consider the general causes preventing the brain from doing its

work well. There may be an excessive general sensibility, which may be produced by an increased amount of blood in the brain from any excitement, fevers or inflammation. Occasionally we meet with marked cases in severe fevers where a little increase of light and sound makes such a great impression on the irritated brain that more or less pain is produced.

In cases of fever, where the blood is very impure, the brain is always irritated to such an extent as to almost entirely prevent it from working. This irritation may cause a constant headache and an unfavorable condition over the entire body, or it may cause any nerve to become affected, and we then have a local disease. We meet many people in feeble health—in whom a deficiency of blood causes an under-supply to both brain and body. Such people are usually very nervous and require careful handling. In most nervous cases some one nerve is more affected than the others and neuralgia or a local pain is the result. I have seen people lose their health permanently through lapsing into a state of nervous weakness, which is left untreated and allowed to become chronic. Instead of being too sensitive there may be a want of sensibility, and the patient may appear being very dull

and lifeless, not receiving even ordinary impressions. The brain and nervous system become so weak that the blood does not circulate freely and congestion follows as a natural result. Or if the brain does not receive enough blood to support it, softening of the brain ensues, with more or less impairment of the senses of sight and hearing.

Paralysis, from too much blood in the brain, is not uncommon, and in some cases recovery can never be complete.

Now and then we see instances of perverted sensibility, as noticed in cases where there is a sensation of crawling over the surface of the skin, a feeling of cold where the body is warm, an intense burning in any portion, itching without a cause, etc. Dr. Williams says that in cases of perverted general sensibility there will be feelings of tingling prickly heat, trickling cold, of a lump in the throat, a hot ball in the side, a fluttering at the stomach, and illusions of the special senses severally and variously affecting persons whose sensibility is modified more in kind than degree. Such patients may also have a depraved appetite, craving for sour things, cinders, mortar and all manner of filth. These symptoms generally occur in females, often in connection with irregular menstruation, and therefore are called

hysterical. But their cause must be sought in the nervous system, the functions of which become deranged, probably from irregular supply or bad quality of the blood.

When the nerve of the eye takes on a perverted condition, the sufferer will have flashes of light, sparks of fire and floating specks in their field of vision; especially are they seen if the brain is affected. If the nerve of hearing becomes diseased in this way, there will be roaring in the ears, the sound of bells, voices and other sounds that are always more or less annoying.

As sensation is a condition of the mind by which we receive information, it can be clearly seen that the mind must be healthy in order to perfectly perform its work. Only a healthy body can produce a healthy mind.

An eminent authority says: "The mind is closely united and yet distinct from the material organ through which it acts, dependent for its manifestations, yet independent in essence. So intimate is the union, that the body exercises a powerful influence in leading us upward into a true and higher life, or downward into a low and sensual existence. What this influence shall be, depends somewhat upon inherited organization, but more upon education. Accepting

the theory already advanced, as at least illustrative, we see that if the thoughts, feelings and volitions are pure and true and good, their impressions or residue remaining in the nerve cells are of the same character, and tend to give a right direction to the future activities of these cells. If the thoughts, feelings and volitions are evil in nature, the impressions or residua, will also be evil, inclining to evil activities in the future. When we resist a temptation to wrong action, then we not only avoid the particular evil, but lay up that which will render the next resistance easier and more natural. If we yield to the temptation, we are not only guilty of the particular wrong, but lay up that which will make resistance more difficult, or yielding more easy and natural for the future. When a man sets his heart to do right, all his physical being struggles to give him aid, and when he sets his heart to do wrong, its energies are expended in dragging him downward. The *visible impressions* which the workings of the mind leave upon the body, are worthy of our notice. The character of a man is declared by the lines of his muscles, which tell no lies; especially is this true of the muscles of the face. Let him narrow his soul by penuriousness, become the victim of rasping jealousy, wear the

nettles of envy against the heart, or be the slave of defiling lust, and in spite of any natural comeliness or studied concealment, his true character will be proclaimed to all. 'Be sure your sin will find you out,' says He, who has made the fleshly lineaments to reveal the most hidden vice. The more secret the viciousness, the deeper is the impression. But if the spirit of evil thus leaves the traces of its blackness upon the face, the spirit of goodness, also, writes thereon, in no less legible characters of light, purity of heart, nobleness of purpose, restfulness of soul, and softens, irradiates and *spiritualizes* the outer man, giving a higher beauty than that of form or complexion, even to him who is wrinkled by years, bowed by infirmity, and scarred by the battles of life."

NUTRITION.

Nutrition is the consummate purpose of all the various functions of the human body. It is life itself. Alimentation, absorbtion, digestion, secretion, respiration and circulation are all directed towards the same end, nutrition, and the failure of any one of these functions, implies impaired nutrition, which injures the life-force.

The connecting link between the functions is the blood, in whose vital fluid their elements are contained. The two elements necessary to support nutrition are nitrogen and carbon, the one producing muscular force, the latter bodily heat. An abundance of these should be found in the blood, which obtains them from different articles of food, and from the atmosphere through respiration. The supply of either of these elements being deficient, the functions dependent upon them become weak in proportion. Malnutrition or bad or insufficient

nourishment may spring from any of the causes given below :

1st. An inherited defect of constitution.

2nd. The presence of some acute disease.

3rd. A continued lack of assimilation and digestion of food.

Patients coming under the first named class are indeed unfortunate. They have not a fair start from the beginning, being almost predestined, as it were, to be the receiving ground for all sorts of noxious germs and specific micro-organisms. Such a person is apt to be undersized and frail, easily fatigued and very receptive to disease. They usually go through the whole category of infantile diseases, and those usually of the most malignant type. The bacilli of consumption, if not already there by inheritance, is easily sown, and to such an individual, life is one of infinite precaution and infinite care to themselves and their friends, with very little comfort as an adjunct.

A lack of proper nutrition, as a result of some acute disease, is apt to be less enduring in its nature, but it leads to various complications during its existence, which may be fatal. There may be various factors in the case of malnutrition coming from non-assimilation

and digestion, i. e. : An insufficient supply of food, as to quality and quantity; an excess of food; the habit of using stimulants, alcoholic or otherwise, narcotics, etc., and various chronic diseases.

When the element of carbon, producing animal heat, is lacking, the patient is deficient in flesh and strength, and subject to a chronic sensation of chilliness. This condition is serious, predisposing to scrofula and consumption, and the fatty element being an important one to the system, benefit is often derived from an ingestion of oily preparations, such as cream, fresh butter, etc., until the deficiency is supplied.

When the nitrogenous element is the deficient factor, and the carbon is in abundance, the wear and tear of the tissues is abnormally great and the repair insufficient, and degeneration ensues. We are often deceived by the appearance of such a person. They seem well-nourished and rounded in outline, but they have no resistance to fatigue, possessing no strength of muscle, and the apparent flesh is often due to a dipose tissue.

Again the most common cause of malnutrition is dyspepsia, "that ailment of the over-fed," to quote from a contemporary. This is found more largely

among the leisure classes who live inactive lives, and who eat for pleasure more than to sustain vitality. The want of exercise is the fatal lack here, as it is absolutely necessary for the proper assimilation of nitrogenous foods, and to their ability to produce muscular vigor. The excess of nitrogenous food is thus eliminated by the bowels and kidneys, and the carbonaceous is deposited in fatty tissue all over the body. Such a condition may be hereditary, but in either case it is dangerous, as the tendency is to become more and more inactive in habits, and it reduces itself to the point, that regular, persistent and vigorous muscular exercise, is absolutely the only safeguard or preventative against fatality.

Mal-assimilation, resulting from chronic diseases, is to be considered, and is one of the most common forms. An impoverishment of the blood accompanies diseases of the stomach, liver, intestines, lungs and kidneys, and the consequent impairment of the digestive processes impairs nutrition also.

Defective nutrition, as the consequent of some mild chronic disease, should not be left untreated, as it may create some disease of a structural nature, presumably of the kidneys or liver. The contraction of malignant maladies is much

more likely to occur when there is a lack of proper nourishment, and a person in a perfect state of nourishment could expose themselves, comparatively speaking, with impunity to contagion.

Science teaches us that we are daily brought in contact, in the atmosphere we breathe, in the food we eat, etc., with poisonous and virulent germs of disease. Why is it that some people perfectly resist the invasion of the bacilli, while others have no resistance? Because a constitution in a weakened condition and badly nourished is in precisely the proper state to receive and propagate, with terrible rapidity, the disease germ, just as a perfectly and completely nourished organism is in precisely the proper condition to resist and defy them.

A potent cause of non-nutrition may be a lack of *proper* food. A patient needing animal foods should not be fed upon vegetables, whose largest element is starch, and if a man wants heat-producing foods, he cannot well exist upon beef tea, and a class of food that has no heat-producing qualities.

APPETITE.

There is no subject that should be better understood by the human race than how to govern the appetite for food. Appetite, in a general way, means a natural degree of hunger or desire to take food to support the body. It should be remembered that we eat only to supply the loss our bodies undergo during their active existence; that appetite or hunger is of the body, or the body's way of saying that nourishment must be supplied to continue life.

As all food must go through the digestive organs and be carefully prepared by them for the body's use, one may readily see that hunger would depend upon the working ability of the preparing organs. A certain amount of food is required to support the body, and if the digestive organs have not the strength to digest it, the body will make it known by the sensation, termed hunger. Hunger may be natural or unnatural.

The natural hunger is not a diseased condition. It is but nature's prompter to furnish what is needed. Very few people have a natural appetite. This is the result of the improper living and methods of cooking now practiced. We should all live in such a manner that we will possess a natural appetite for food. By so doing one half the ills "that flesh is heir to" would be avoided. When the appetite is natural we take pleasure in eating, and when we take the proper quantity and quality, nature very kindly handles it with ease.

The abnormal or morbid appetite is generally produced by continued habits of indulgence, which enfeeble and insidiously impair the health until the ability of the digestive organs and the strength of the body is exhausted. The individual becomes weak, irritable and selfish, and possibly may lose his self-respect, and all native refinement and delicate feeling, and become of no use to himself or the world.

A learned author says: "The natural sun of heat and light within the body, and the soul, being overcast by the clouds and exhalations of unhealthy organs, often leads the victim of self-indulgence to seek externally for artificial stimulants to keep up an appearance of genial warmth within. But this can be appar-

ently successful only for a time, and soon the penalty of the transgressing of the laws of nature must be paid in full, and with a large additional amount of costs. It is of great importance therefore to watch the appetites of body and mind, to study the laws of healthy equilibrium, and above all, to learn to know and understand the dangers of prolonged self-indulgence of the appetites of pleasure in mere animal sensation and wild imagination."

Appetites, properly so-called, apprise man of the natural wants of the organism, and compliance with these internal promptings is rewarded by the double pleasure of the sense of taste in eating, and the feeling of comfort within, arising from the food supplied to the digestive system. But where the mind is weak and the delights of bodily sensations strong, the pleasures of taste, or the charms of varied sensations in the palate, dwell on the imagination and excite it to renewed indulgence of physical sensations, irrespective of the wants of the internal organism, and this, even, notwithstanding its declining health and manifest debility.

The morbid cravings and perverted tastes must not be confounded with the natural appetite. This unnatural craving is illustrated in the animal creation

by the bear in his inordinate fondness for honey. His sense of taste for it is so great, and it works on his imagination to such an extent, that he will risk being stung to death rather than not have the sensual delight of licking out the honey-comb. This same principle is blindly followed by the human race. It causes a large amount of suffering which is styled indigestion, headache, nervousness, rheumatism, neuralgia, etc.

No careful observer of the habits of the people can fail to account for all the diseases that afflict the human family. They are too much the victims of disobedience. They do not obey the natural laws of life, and as a result, we have diseases which speak to us too plainly to be misunderstood, if we would but listen to their warning voices.

The very common error of eating at all hours of the day and night to satisfy our craving appetite, only makes a bad matter worse. Acidity, flatulence, heartburn, slight pain in the head, uneasy sensations anywhere about the body, all speak too plainly of trouble soon to come unless soon relieved. When we find ourselves in this condition, nothing should prevent our speedy extrication from the annoying and depressing condition resulting from these cravings. It must be remembered that

if the appetite for food becomes morbid, all the other cravings of the system become morbid also, and too often control the individual, instead of the individual controlling them. Unless we have a well-balanced physical status, the most thorough education of our youth on the highest moral plane will avail but little.

The Duke of Argyle very properly says: "The truth is, we are born into a a system of things in which every act carries with it by indissoluble ties, a long train of consequences reaching to the most distant future, which, for the whole course of time, affect our condition, the condition of other men, and even the conditions of external nature. And yet we cannot see those consequences beyond the shortest way, and very often those which lie nearest are in the highest degree deceptive as an index to ultimate results. Neither pain nor pleasure can be accepted as a guide."

With the lower animals, indeed, these for the most part tell the truth. Appetite is all that the creature has, and in the gratification of it, the highest law of the animal being is fulfilled.

In man, also, appetite has its own indispensable function to discharge. But it is a lower function, and amounts to nothing more than that of furnishing to reason, a very few of the primary data

on which she has to work. Physical pain is indeed one of the threatenings of natural authority, and physical pleasure is one of its rewards. But, neither the one nor the other, forms more than a mere fraction of that awful and imperial code under which we live.

Man has been, and still is, a constant prey to appetites which are morbid; to opinions which are irrational; to imaginings which are horrible, and to practices which are destructive. The prevalence and the power of these in a great variety of forms and degrees, is a fact with which we are familiar. So familiar indeed, that we fail to be duly impressed with the strangeness and the mystery which really belongs to it.

All savage races are bowed and bent under the yoke of their own perverted instincts. Instincts, which, generally in their root and origin have an obvious utility, but which in their actual development are the sources of miseries without number, and without end. Some of the most horrible perversions which are prevalent among savages, (and which to a greater or less degree effect all civilized peoples,) have no counterpart among any other created beings. And when judged by the barest standard of utility, they place man immeasurably below the level of the beasts.

We are accustomed to say of many of the habits of savage life, that they are brutal. But this is entirely to misrepresent the place which they really occupy in the system of nature. None of the brutes have any such perverted dispositions. None of them are ever subject to the destructive operation of such habits as are common among men. And the contrast is all the more remarkable when we consider that the very worst of these habits effect conditions of life which the lower animals share with us. Any departure from those natural laws which they universally obey, must necessarily produce, and do produce, consequences so destructive as to endanger the very existence of the race.

Such are all those conditions of life effecting the relations of the sexes, which are common to all creatures. And man alone, exhibits the widest and most hopeless divergence from this order of nature. Byron was in touch with this sentiment when he said :

“ Know ye the land where the cypress and myrtle,
Are emblems of deeds that are done in their clime ;

* * * * *

Where the citron and olive are fairest of fruits,
And the voice of the nightingale never is mute ;
Where the virgins are soft as the roses they twine,
And all, save the *spirit of man*, is divine.”

INDIGESTION.

But indigestion hath the power
To mar the soul's serenest hour—
To crumble adamantive trust,
And turn its certainties to dust.
To dim the eye with nameless grief,
To chill the heart with unbelief,
To banish hope, and faith, and love,
Place heaven below and hell above.

—*Mark Twain.*

What a world of health and happiness is lost in the significance of this common word! What a world of misery does it convey to the mind of the person who has realized its true meaning. It is, practically speaking, the crying ill of the American people.

We are a race of gourmands. There is no civilized nation under the sun, that eats so much so hurridly or so unadvisedly as the American. The English, with their long drawn out dinners, come next; and they have the merit of eating slowly. Then the Italian and the French, barring their cooking, have eating reduced to a fine art.

Taken in its fullest sense, digestion comprises all those processes which the food undergoes in passing from its crude form to its ultimate destination of tissue, whether for building or for force production. These processes may be divided into two classes—external and internal digestion.

The first comprises the successive steps by which the food elements are prepared by the mouth for admittance to the interior of the body. The latter consists in absorbing the elements that they may be made available for nutrition and force production. It is a form of digestion less understood than the first, and probably its disturbances constitute the cause for a large class of the most serious diseases.

There has been a nice distinction drawn between dyspepsia and indigestion, giving to the former the idea of a laborious performance of the digestive processes, while in the other there is no process performed at all. Practically, however, there is no such distinction, as both terms indicate a greater or less derangement of the digestive operations.

The causes of indigestion may be divided into two classes, those involving the character of the food itself, and those consisting in the imperfections of the process to which it is subjected.

There is a small number of people who do not take food enough to furnish the digestive organs with a sufficient amount to work upon. There are the hard-working women in large cities trying to exist upon bread and tea. Then the fashionable people who have mounted the hobby of dieting, and ride it to such extremes that it would be laughable, were the results not so serious.

It has been claimed, and with considerable truth, that the decline of the Irish race is largely due to their almost exclusive use of potatoes as food. There is so little of the nourishing element in them that the excessive amount eaten, in order to satisfy hunger, results in burdening the digestive organs with a bulk of useless material. This impairs their force, and the body, at the same time, is underfed. It is the quality, not the quantity, that nourishes the system and sustains life.

Again, the use of alcohol will diminish and eventually take away the appetite for solid food. This is a particularly lamentable custom among workingmen, where the tendency is to spend so much for drink that they have nothing left with which to procure food, even if they had a desire for it. The result is starvation dyspepsia.

But overeating is the more common fault. It is probable that the majority of people habitually eat more than their systems require. The excess renders ineffective the various acids designed to operate upon a moderate amount. The uncomfortable dilation of the stomach and intestines follows.

One very prevalent cause of this is the short time usually given to meals. When the normal stomach has received a sufficient quantity, impressions carried to the nerve centers produce a decrease of appetite. But if the food is hastily swallowed, time is not given for the regulating processes to take place, and the stomach is overloaded before the warning is received. The art of cooking should be to render food more digestible instead of spurring the appetite beyond its limit.

Another source of digestive derangement is irregular and improper times of eating. Many busy men and women take the noon-day meal to suit the occasion—sometimes hot, sometimes cold; light or heavy, as convenient.

The digestive organs, like all others belonging to the body, require periods of rest. If these periods are broken in upon at every and any hour of the day, it is evident that the functions cannot perform their work properly. A hearty

meal taken just before going to bed is likely to interfere with digestion or sleep, possibly both.

The chief meal of the day should not be allowed to occur just before a period of great activity—mental or physical. For action elsewhere will abstract the blood from the alimentary canal, and the secretions will be defective. When the power of the stomach has been weakened, frequent light meals might be permitted, that the organism may be afforded the necessary amount of nutriment, and at the same time, prevent overwork. Yet, even in such cases, it is necessary for the stomach to have a certain number of hours daily for rest.

Each person must be a law unto himself as to the quality and quantity of food to be used. Men of active outdoor habits can live with impunity upon a character of eatables that would bring death and destruction to those of an indoor and sedentary mode of life. Yet, even these gastronomic giants, were they to change their mode of living, could no longer live upon underdone pastry, warm, soggy bread and fat-soaked cakes. Many rosy-cheeked country girls, learning a trade in the city, lose health and beauty through ignorance of the fact that they can no longer live upon their accustomed diet.

The use of fluids, when eating, is another potent cause of trouble which seriously interferes with the ferments. One cup or glass of any liquid is all that should be taken while eating. More than this quantity should be taken either a half hour before or two hours after a meal. Man is the only animal that drinks while eating, and it stands to reason that a quantity of food floating about in an undue amount of liquid, cannot be acted upon properly by the juices of the stomach. As a result, it will neither be digested nor assimilated.

In cases of weakened stomachs it is well to cut off the use of sugars and fats, as these are especially difficult for it to handle. While pepper and spices are sometimes a useful adjunct in moderate amounts, they are apt to over-stimulate the mucous membrane of the digestive tract, and so lead to exhaustion.

Excessively hot and excessively cold foods require only to be mentioned as disturbing causes. A glass of ice water taken during digestion will lower the temperature of the stomach to seventy degrees, and it will not regain its normal temperature for about half an hour. Nervous stimulants such as tea, coffee and tobacco, may be classed with condiments in their effect.

The French cooking, which is coming

more and more into vogue, has many grave faults, its object being not wholesomeness, but rather to develop abnormal appetites. Broiling, roasting and boiling are preferred methods of cooking meats. Frying produces a greasy coating composed of the fat in which it is fried, and this resists the action of the digestive fluids. This constitutes a grave objection against all kinds of fried foods.

The local symptoms of indigestion are well known—the coated tongue, bad breath, and other derangements producing irritability.

A perfect body is formed from the food in a perfectly digested condition. Therefore, to have perfect bodies it is necessary to have perfect digestion. This forms perfect blood, which is the body in a fluid state, and from it we get the perfect organized body.

TAKING COLD.

The matter of taking cold is one that is so familiar to us that we do not often stop to question the why and wherefore. In the minds of the majority of the people, the idea of a cold is associated with the absolute sensation of cold, or a direct loss of heat from the body. That this is an erroneous idea, is proved by the fact that the body is constantly radiating heat without in any way suffering therefrom. It is one of nature's beautiful laws of balance that the supply of animal heat is equal to the demand.

Of course this refers to a state of health when the heat of the body is constantly maintained at all seasons and at all times at a temperature of $98\frac{5}{8}$ degrees. Any variation from this standard, be it ever so small, constitutes a condition of disease.

When the demand for heat is great, as when the thermometer ranges below zero, it is supplied by the rapid heat production going on in the system. This

results in part, from the vigorous exercise which extreme cold usually induces.

The source of this animal heat has been the subject of many theories on the part of physiologists, but it is now known that all processes of nutrition, growth and development of the human body, constitute a form of oxygenation, which is the heat-producing factor of the organism. This process is not confined to any one portion or member, but goes everywhere, maintaining the above mentioned equable temperature of 98 $\frac{5}{8}$ degrees.

Now, experience teaches us that the risk of taking cold is not incurred by exposing the whole body to a lower temperature, but any portion of it. Draughts of air make more mischief than any amount of dry cold. With greater impunity can we expose the whole body to a blast of cold north wind, than to chill the feet from wearing too thin soles.

Of the four seasons, the days of our greatest liability to colds are not those of winter, but the moderately cool ones of spring and fall, when the atmosphere is largely charged with moisture. A low temperature is not dangerous. Dampness makes the trouble.

The heat of the body is governed by the central nervous system, and any dis-

turbance of the heating apparatus in one part, leads to a disarrangement of the whole system. An eminent author has compared this central nervous system, which governs the whole matter of warming the body, to a chandelier with five gas jets. If they are all lit and burning with a steady flame, this constitutes health. If we turn out a part of them, two or three perhaps, we find that the others flare up with an increased intensity, which represents a diseased condition. Now, if one of the burners is somewhat weakened, it flames up above the globe of the chandelier in an abnormal jet. We may liken this to the inflammation caused by taking cold. Thus it may be argued that inflammation is simply an exaggerated state of health. Nutrition being disturbed in one part of the body, the central nerve force governing the heat production goes on creating the same amount of energy as before, sending it with increased intensity to another part. This may result in bronchitis or cold in the head.

Inflammation or cold settles itself in the weakest place. This will explain the fact that the mucous membrane lining the nasal passages is oftenest attacked, because the majority of people have a mild chronic inflammation there. Perhaps it is scarcely noticeable, but being ag-

gravated, starts up into an acute state. Following the line of weakest parts, it is apt to give rise to sore throat, swollen tonsils, an attack of irritable bladder, or (perhaps) lumbago. In cases of chronic inflammation a patient may be subject to colds in the head for years, and, as the disease travels downward, it settles in the bronchial tubes or larynx, leaving the nasal passages clear, but they become involved later.

There is no term in medical literature that has been the source of so much misconception as that of chronic catarrh, which means nothing more than a discharge from the nose. This has been made to cover the whole category of diseases which may be met with in the nasal cavity. The term chronic catarrh is a meaningless one, and conveys no idea other than that one has something the matter with the nose.

An intelligent comprehension of how to prevent a cold is of far more importance to the general public than to know how to treat one. This can be done by a proper regulation of the clothing, keeping the skin active with the daily bath, a good ventilation of living and sleeping apartments, exercise, etc. It is an almost banished idea to load on all the clothes a person can possibly carry to avoid taking cold. We wear clothes

to protect ourselves from low temperatures, and we should wear just enough for this and no more. The moment we overdo the matter we are liable to work mischief. There should be an equal distribution of garments also. The moment we clothe one portion in excess of another, we are opening the way for disease.

The most important part of the clothing is, of course, that lying next to the skin—the underwear. There is more heat in the body than is necessary to keep it at the normal temperature. This excess of heat is dissipated by a means called insensible perspiration, which is going on constantly. It is estimated that in twenty-four hours about sixteen ounces of water are dissipated from the body of an adult. This goes on without our being conscious of it. When we indulge in violent exercise the perspiration becomes excessive and perceptible, but it is the insensible perspiration which is important in this connection.

The highest authorities say that a person in vigorous health should wear a light weight of woolen or knitted underwear the year around, making no change for the four seasons. They claim that we would be warmer in winter and cooler in summer for this practice. This theory is based upon the fact that the

fibre of wool is elastic and curling, offering a porous cloth next to the skin, which does not interfere with this insensible heat radiation. That of silk, cotton and linen is straight and inelastic, making an impermeable dense surface which allows less outlet to the excretions of the skin. Our houses are ordinarily kept at a temperature of 68 to 70 degrees in winter, which does not vary greatly from the average temperature of the summer months. There are many cases, however, in which this would be impracticable. But it is a fact that one does not perspire so freely in a suit of woollen, for the reason that the wool absorbs the perspiration and allows the bodily heat to pass through it. One is also protected from sudden chills in this manner. But there are individuals so sensitively organized that they cannot endure the feeling of woollen next to the skin, to whom silk, linen or cotton are agreeable and healthful. A change of underclothing, according to the season and in compliance with the outer garments, would be advisable in many circumstances.

Some think that the Creator did not intend us to wear hats, supporting their theory with the idea that the long-continued and excessive use of head covering causes much of the baldness

prevalent, especially among professional men, men of indoor habits and great brain workers. Men's headgear, also, is usually of heavy felt or silk, while that of women is apt to be more airy. This is the reason given by some for their healthy and luxuriant growth of hair.

There are certain pernicious habits of unduly muffling the neck, padding the chest, etc. A writer has said that the best place to wear a chest protector is on the soles of the feet. It illustrates the idea that the part of the body exposed to draughts, has nothing whatever to do with the portion in which the cold or inflammation is likely to appear; that the feet, coming in contact as they do with damp and cold pavements, should be most looked after and protected. Thick soles or cork soles are exceedingly good protection. Rubber overshoes are a necessary evil that should be used as little as possible. They contract the feet, retard circulation and retain moisture.

Sealskins were designed for animals inhabiting the Arctic Ocean and not for sensible men and women of the temperate zones. They are absolutely impermeable to cold or air, and almost invariably throw the wearer into a perspiration. The evil of the chill consequent upon removing the garment is

evident. It is a fact that these beautiful articles of feminine apparel have caused more death in the city of New York in the last five years, than smallpox.

We have observed that the people who wear the greatest amount of clothing are always shivering at the slightest gust of cold air, while those who harden themselves by moderate dressing are able to face the coldest winds of mid-winter with a sense of exhilarating comfort. Of course young people, old people, or those enfeebled by disease, cannot come under this rule. Their heat-producing powers are not normal, and discretion must govern.

Of more importance even than proper clothing is the proper use of the bath as a preventative against colds. A daily bath is almost an absolute necessity with a healthy person. Not as a matter of cleanliness in all cases, but because of its effect—a vigorous stimulation of the skin and increased circulation of the blood.

COLD HANDS AND FEET.

Many people, though in fair health, have cold hands and feet most of the time. This is indeed of such common occurrence, that its importance as an indicator of disease does not strike the attention as it should, not even with those who suffer the most frequently with this uncomfortable sensation. This should be a symptom that calls attention to danger, and indicates a disorder of the bodily mechanism or of deterioration of the vital fluids, either of which should receive prompt attention. If disregarded, it may lead to grave diseases.

The above conditions must not be confounded with a temporary chilling of the limbs from exposure to cold or moisture, which may be easily relieved by warmth.

How often do we see people make serious mistakes by not heeding nature's common signs of distress. There are several conditions that will give rise to cold hands and feet. The most common

are: Indigestion, nervousness, imperfect circulation, impure blood, and want of life force.

In order to fully understand how these causes produce such results, we should not forget that the circulation of the blood, which gives the heat to a part, is governed by a delicate system of nerves which regulates the size of the blood-vessels. One set of nerves causes the blood-vessels to dilate and admit the proper or abnormal quantity of blood into a part. The other set contracts these vessels and prevents the blood from flowing to the extremities or skin. When the nerves act suddenly from any cause and dilate the blood-vessels, we will notice blushing or a red condition of the surface. But if from any cause the vessels are contracted suddenly by the nerves, then pallor of the face and external surface will follow.

Indigestion is the most common cause of cold hands and feet. The undigested matter in the stomach and bowels irritates and stimulates the nerve centers, causing contraction of the blood-vessels, which prevents sufficient blood flowing to the parts to keep them warm.

In fermentive dyspepsia, where there are large quantities of gas forming nearly all the time, it not only produces cold hands and feet, but a pale and sickly

appearance of the entire skin. This want of blood in the surface of the body prevents the parts from getting their proper nourishment, and without support they must fail. If this failing goes through the tissues, they will take on organic disease and be beyond relief.

How often have we seen people decline and become unfit for pleasure or business, from neglect of nature's minor warnings that there are existing ailments near the vital centers.

Nervousness often gives rise to cold extremities. The nervous system is so finely organized and so sensitive to impressions, that little irritations and shocks impress the nerve centers in an unfavorable manner, and by so doing, cause an unequal circulation of the vital fluids.

Almost everyone is familiar with the effect of emotions. Anger, pain, sorrow, jealousy, hatred or joy, will set the nerves immediately at work to contract the blood-vessels, deprive the surface of blood, and depress the temperature of the parts. Such a high grade of nervousness should not be allowed to continue, as it soon leads to an inability on the part of the nerves to do their work, and finally to serious organic diseases. No person should allow themselves to continue in such an exaggerated condi-

tion without hastening to determine its cause and effect an immediate relief.

Imperfect circulation is often responsible for coldness in any part of the body. There is a good reason why the extremities should be cold in this age of weak hearts, for we often find that organ not strong enough to propel the blood into the extremities with sufficient force and rapidity to keep them comfortable. It should also be remembered that the hands and feet are more remote from the central organ of circulation than any other portion of the body.

If from any cause we are led to think that we are suffering from a weak heart, the most beneficial treatment should be commenced at once, as the body will soon badly suffer without the proper quantity of blood to support it. Then, too, the weak heart may soon develop into an actual organic disease.

Coldness of the extremities may also be occasioned by impure or unhealthy blood. The natural heat of the body, as well as its growth and repair, is mainly due to the oxidation occurring in all the tissues. The red corpuscles of the blood convey to the tissues the oxygen required for this very important process. If these red corpuscles become diseased, they cannot act as builders, and convey the amount of oxygen

needed for the body. If from any cause the proper number of corpuscles is not kept up, the tissues do not receive their required amount of oxygen, and they fail for want of nutrition. This is a very common cause of decline.

A very able authority has recently stated that the human race requires one third more oxygen than it ordinarily receives. If this condition is allowed to continue, the race will certainly grow weaker and never enjoy a desirable degree of strength. This lack also leads to an inability to keep up to the standard of normal bodily heat, and the extremities being the most exposed, are the first to suffer. All people suffering in this way have but little power to live, and their appearance will not deceive the careful observer as to the effecting cause. They have clammy skins, pale faces, bad digestion, enfeebled muscles, weak nerves, inactive kidneys, no healthy sleep, always tired, and feeling in a general way that life is a failure. Obeying the laws of life and the proper medical attention may soon restore a normal condition.

Many people suffer with the opposite difficulty—an excessive burning of the extremities. As a general rule, abuse of the digestive organs is the disturbing cause. An enfeebled condition of the

sympathetic nervous system causes a dilation of the blood vessels in the extremities, and consequently we have an excessive amount of blood in these parts which will continue this diseased condition until the causes are removed. Nervous and excitable temperaments, subject to dyspepsia, are very prone to this affection, which is commonly confined to adult life. A permanent cure of this condition is difficult to accomplish, but it can be made if the cause is removed.



EXERCISE.

The whole study of physiology and anatomy proclaims that the human organism was intended for activity. The power of muscle, nerve control, digestion and circulation, all depend upon exercise. Man must labor, hence action is a necessity. But, if working to no purpose, nothing appeals to his intelligence, and is consequently of little benefit.

Labor in moderation is a benefit and a blessing. But when unhappy necessity causes it to be carried to excess, as is the case with so many of our unfortunate brothers, it becomes a drudgery and a curse.

As skill in any one line of labor requires time, thought and intelligence, we are apt to confine ourselves to that one line in order to acquire greater facility. The tendency of this system is to call some powers into active exercise and leave the rest unused. There are few people who do not require more activity

than their ordinary occupation calls into play. We will treat of the benefit of systematic and well-regulated exercise to eradicate this evil.

The involuntary processes, as digestion, circulation, respiration, secretion, etc., which are carried on independently of the will, are dependent upon food assimilation for their energy. The voluntary muscles, which give rise to labor and action, are, in turn, dependent on these. Exercise involves waste and repair. This calls into higher action the whole apparatus of supply and excretion, causing that vital renovation which is the source of energy.

Movement aiding the contraction of the voluntary muscles, the flow of blood is accelerated to all parts of the body, and helps to remove all waste products by rapidly transferring them to the proper eliminating organs. Increased circulation meets the demand for new material and renews the disintegrated structures.

Exercise is a well-known heat-producing factor. Hence, walking is effectual in warming the feet. Whatever quickens the pulse hastens the breathing. The office of respiration is to rid the system of its refuse carbonic acid, and to furnish it with that vital element—oxygen. As a consequence, free respiration in a pure

atmosphere is an essential to proper exercise.

Muscular movement depends upon the excretion of carbon from the system, and this depends upon the state of the air itself. Thus, badly ventilated houses, workshops and factories, unfit an individual for active exercise. One hour in the open air is worth half a dozen in gymnasiums.

As muscular power comes from a proper assimilation of food, a throwing out of force sharpens the appetite. Persons engaged in close mental application, or those troubled with indigestion, induced by sedentary habits, can easily find relief in systematic exercise in the fresh air. One should not exercise after a full meal, as the stomach is more or less distended, and this condition interferes with the free movement of the diaphragm and heart. The digestive organs need their full force of workers to accomplish digestion, as they cannot afford to allow the blood and nerve force to be drawn away to the other muscles at such a time.

During active exercise the skin becomes invigorated through the increased amount of blood drawn to the surface, and heat is rapidly developed within. This escapes by water through the skin. If the individual is in active motion, the

skin may be exposed without danger. But when the exertion is over, the heat rapidly declines and a sudden cooling causes congestion.

Like all habits of hygiene, exercise should be regular and a daily duty. In order to be effectual it should be continued for at least half an hour. If the exercise be associated with something pleasant, spontaneous and exhilarating, it becomes a pleasure.

A sufficient amount of work put upon the muscles increases their vigor, size and elasticity. But should it be pushed to the point of exhaustion, destructive changes prevail over reparation, the equilibrium is lost, bodily vigor lowered, the encroachments of disease facilitated, and the finale is a broken down constitution and premature decay.

The opposite picture is not flattering. Inactivity entails debility. As nutrition and a healthy development of all active parts depend upon a proper amount of action, its absence gives rise to feebleness of the whole organism. However, if the lethargic condition is accompanied with a corresponding ratio of low diet, the evils resulting will be comparatively negative. But if it be coupled with a free indulgence of the appetite, a long list of afflictions follows in its train. Food that should be assimilated and ex-

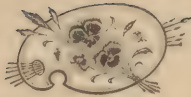
pelled from the system accumulates, clogging the machinery, decaying in the stomach and poisoning the blood. Among its prominent results are: An abnormal accumulation of flesh amounting to actual disease, fatty degeneration of the heart, etc.

The amount of exercise required by each individual can be determined by himself alone. No one can be a true judge in every respect for another.

But exercise has a still higher application. The mind has its states of health and disease like the physical, and is intimately dependent upon the body. We are confronted with the problem of mind and body, a living unit, each ever reacting one upon the other. The mind is dependent upon the condition of the brain, and the brain is controlled by the condition of the body. Hence, our very intelligence is governed by the care taken of the body.

If we are nervous, low-spirited and irritable, we are filled with gloomy and foreboding thoughts. We have spent much time indoors, inhaling little oxygen and our systems are filled with carbonic acid. The circulation of blood through the brain is low. We are dull and stupid. We should walk out into the free air of heaven and breathe pure oxygen. The poisonous carbon is expelled; the quick

motion sends the blood coursing through the body and brain, bringing it to the surface. Our spirits rise, doubts and fears flee away, and we re-enter the house at peace with ourselves and our neighbor.



AIR.

The atmosphere is to us so simple and natural a thing, such a matter of every day breathing, that its very familiarity is apt to make us lose sight of its import for good or evil.

A proper supply of pure fresh air is essential to the preservation of life and health, as well as to the maintainance of cheerfulness of spirits and consequent enjoyment of life. We sleep in badly ventilated bedrooms, or worse, with no ventilation at all—all during the winter months; spend two-thirds if not all of our time within doors, and then wonder why we do not feel better.

There is a great difference in individuals as to their sensitiveness to impure air. Some persons can sit with comfort in an apartment, the atmosphere of which would stifle another upon entering. However, the air of an ordinary home is seldom so bad as to cause any sudden discomfort, or even to be noticed by the casual observer, but it is never-

theless, a fact, that the majority of houses are so badly arranged with regard to ventilation, as to cause a slow, but none the less sure, impairment of the vital energies. This is particularly true in the case of invalids and young children.

Pure air contains 20.99 per cent. of oxygen and .033 of carbonic acid gas, the rest being made up of nitrogen, watery vapor and traces of ammonia. The relative proportions of oxygen and carbonic gas differ slightly with the locality, some places being blessed with more oxygen than others. The air of high mountains, contrary to the general belief, contains more carbon and less oxygen than that of the low districts. There is always less oxygen in cities than in the country. The average proportion of watery vapor is 1.46 per cent. A deviation from this standard renders the air too dry or too moist for comfort.

The impurities of the atmosphere may be classed under two heads—gases and matters held in suspension. We may discover the latter in any chance sunbeam.

Oxygen is the life-giving element of the air, and carbon the destroying. When we breathe we consume oxygen and accumulate carbon, and if this process

goes on for a short space of time, even in a small room with bad ventilation, the air speedily becomes unfit to support life. The result then of putting several human beings together in such a manner may be imagined.

Bad air is responsible for more tired feelings and dull headaches than any other cause. Every apartment should be provided with means of egress for impure air at the top, and access of a sufficient amount of fresh air in the lower portion. Perfect ventilation cannot be obtained without this, but as the majority of houses contain no provision of this sort, the best we can do is to open the windows wide.

A lighted candle, a gas jet and an air-tight stove vitiate the atmosphere to a great extent, but an open fire is an efficient means of purifying the air. It is estimated that a solitary act of breathing spoils good air to the extent of losing one-third of its oxygen, this being replaced by the deadly carbonic acid gas. This process going on through eight or ten sleeping hours, renders evident the necessity of the sleeping apartment being the most airy and well-ventilated in the house. Almost every bedroom may have the door left ajar, the window sash let down a few inches at the top and raised slightly at

the bottom, and this precaution would secure a lighter, shorter and more invigorating sleep. If, on the contrary, as is frequently and unhappily the case, every door, window and aperture is carefully guarded from the air, the sleep is heavy, unrefreshing, and partakes more of the character of insensibility.

Nearly one-third of our lives are passed in our sleeping rooms, and a dread of draughts should not prevent them from being properly aired. Beds also should be thoroughly and completely aired every day. Bed-clothing has a strong tendency of itself to absorb moisture from the atmosphere, and two persons occupying a bed for eight hours, will impart to the sheets by insensible perspiration, and to the air by breathing, a pound of watery vapor charged with latent animal poison.

Sleeping rooms on the upper floor are preferable, as they are usually of a sufficient height to raise them above the poisonous miasms which lurk close to the ground, more especially at night, when not affected by the sun's rays.

Unaired cellars in houses are also a fruitful source of disease. It is not necessary to have a cellar half filled with rotting garbage to be unhealthy. Cellars, from their location near the ground, contract dampness and earth

poisons, even when constructed so as to be water-proof, and thorough ventilation is their only salvation.

In the most of houses, especially those heated by air-tight stoves, the air is gravely deficient in moisture. The common method of simmering water in an open vessel is seldom sufficient, and a better plan is to wet a large cloth in water and suspend it upon some framework. A little chlorate of potash in the water adds to the moisture. The cloth, if unsightly, may be concealed behind some pretty screen or curtain. Thus moisture, even if produced artificially, is necessary to give the air the soft and balmy qualities essential for comfort. If the air is very dry, an open vessel filled with boiling water may be added to this arrangement.

A good deal has been said about the poisonous influence of green paper wall-hangings. It is a fact that the basis of the bright green coloring matters is arsenite of copper, which is deadly poison, and it is a fact also that a room papered in this fashion would, in damp weather, exhale a certain amount of poisonous vapor. This pigment produces the most beautiful of bright colors, but the use of green should be avoided in wall papers.

House plants are rather favorable

than otherwise in their effect. In the day time, under the influence of light, they absorb carbonic acid from the atmosphere by their leaves, decompose it and return pure oxygen to the air, thus tending by a double action to purify it. In the absence of light, the action of the leaves is reversed. Thus, in sleeping rooms, their tendency would be to impurity rather than purity. As regards moisture, they are useful in supplying dry air with the requisite humidity, their leaves exhaling dampness through their pores.

Parents should always inspect the size and ventilation of the schoolrooms where their children spend so much of their time, as loss of appetite, headaches and general delicacy often attributed to overwork, is, in reality, due to the want of fresh air.

The ventilation of churches is notoriously bad. Mr. White says in this connection: "The wakefulness of congregations would be much promoted if the truth were more freely mixed with oxygen. Nothing except dull sermons makes men more sleepy than carbonic acid."

We have one consolation in it all. In all healthy localities the atmosphere is more or less self-purifying. There are many natural causes at work which

tend to remove impurities—processes of vegetation, rain, lightning, storms and winds, which, operating through vast volumes of atmosphere, set free poisonous gases and emanations, and oxygen burns them. Thus the atmosphere is a law of purity unto itself, and preserves on a grand scale, its own undisturbed vital relation to animal life.



WATER.

Water is as important an element of the life forces as light, heat and air, and it is a prominent factor in all kinds of foods. All fluids taken into the stomach are conveyed to the blood, thus supplying the constant waste which is going on in the system, by means of perspiration, etc.

Thirst is the sensation resulting from the demand of the system for fluids, as hunger is the result of a corresponding demand for solids. When there is a great loss of fluids from the body, thirst is constant; in warm weather, when a greater amount of fluid is expelled in the form of perspiration, thirst is more urgent, and also where there is an inordinate use of salt, spices, stimulating liquors, etc. The only fluid which is suitable for the customary drink of man, and for the proper dilution of his food, is water. In some cases of sickness or debility, where water alone disagrees, it is sometimes advisable to mix with it

certain aromatic, acidulous or farinaceous substances.

The quantity of water which should be taken, varies with circumstances, and with the individual. During an excessively warm day, a healthy adult should consume from three to four pints, while a pint or half pint will suffice for cold weather. It is not wise to swallow large quantities at once; two or three mouthfuls are all that should be taken at a time, and that slowly.

While it is an undisputed fact that the majority of people do not drink enough water, there is a danger of adding too much fluid to the circulation, which increases the systematic waste, and makes an increased demand upon the vital energy. It has been supposed that the excessive use of fluids tends to produce leanness or emaciation, but observation has proven that corpulent people are apt to be the greater consumers of all beverages. It is an extremely bad thing to do, to flood the stomach with any sort of fluid just before a meal, as it seriously interferes with digestion, by so washing out the gastric juices that they cannot properly attack the food thrown into the digestive tract.

The use of ice water during the very warm weather, is now very generally condemned by seekers after health,

but its temperate use often acts as a healthful stimulous to the stomach. When a person is overheated by exercise, however, and thirst is great, overdraughts of ice water often produce fatal results, and great prudence should be observed.

As a matter of course, purity is the standard of perfection in water, and in this respect, spring water stands at the head, rain water next, and river water following—that is, if it contains no injurious substances. Hard water, as a rule, is more or less impregnated with mineral substances, which greatly lessen its solvent powers, and give rise to abnormal conditions of the blood, from which spring many chronic diseases. No water coming in contact with lead should ever be used, as its action is extremely poisonous. Well water, when it is pure, is also desirable, but the use of wells is attended with so many detrimental contingencies that they are generally considered unsafe, especially in towns which at all approach cities in size. All waters are improved by boiling, but they should be poured from one vessel to another, in order to regain from the atmosphere, the oxygen which they have lost.

Water is purified by allowing it to slowly filter through charcoal, but the

charcoal should be renewed every three or four days, as it loses its purifying qualities. A good home-made filter can be made of sand, gravel, porous earth and stone, the water being kept covered.

Various substances are added to water to form nutritious, palatable or stimulating beverages. Toast-water is a drink formed by pouring boiling water over bread or biscuit toasted very brown. It constitutes a pleasant and slightly nutritious fluid for weak stomachs, and is useful in settling a stomach just recovering from a bilious attack.

When milk is allowed to stand for a length of time, it separates into two parts; curd, the white or solid part, and whey, a thin, greenish-yellow fluid. This has an agreeable taste, it digests easily, and effects a healthful change in the bodily fluids and secretions. It will be found a very good article to allay thirst in hot weather.

Mineral waters, both natural and artificial, are very grateful, but they should be used, as a rule, under prescription, and never immediately before or after a meal, on account of the gas which they contain. This rule applies to all soda waters, which should be taken in moderation and with caution. They are doubtless a temptation on a hot day, especially when put up in the pleasant

forms drawn from our soda fountains, and are often a pleasant stimulous, not harmful in instances of great fatigue, but great prudence and discretion should be observed in their use.

Tea, the familiar household drink, has a variety of qualities, pro and con. There is no doubt, however, that tea used daily, and in any quantity or strength, is decidedly injurious, especially to nervous temperaments. Black tea is preferable to green, as it contains less stimulating and narcotic principles. A weak infusion of tea may be taken at the evening meal without harm, and is often very refreshing. It should not then be taken through the day, however, and it is well to vary the drink with each meal, never using the same one three times a day, and always remembering that pure, cold water, is best adapted to the needs of man.

Mocha, Java and Havana, are said to be the best brands of coffee. On account of its strong, stimulating properties, the continued use of this article is apt to form a habit as pernicious and difficult to discontinue as that of alcoholic liquors. The animation and brilliancy it occasions, is, of course, unnatural, and is invariably followed by sadness and lethargy, with the accompanying wear and tear upon the system. It deranges

the stomach and injures the digestive organs, and should never be used by children or dyspeptics. A moderately strong cup at breakfast, may be taken by persons of active habits.

Chocolate is a very nutritious drink to those who can handle it, but its exceeding richness makes it difficult of digestion.

Cocoa is less oily than chocolate, less difficult to digest, and agrees very well with many persons. Its action on the bowels is rather astringent.



PERSONAL BEAUTY.

“The outward sign of the inward grace.” This is the connection in which we would introduce this subject as related to our work. Just as refinement and taste in dress are sure indications of a certain amount of refinement and taste of mind, so is a desire to preserve to the utmost every charm of health and beauty, a sure sign of an inward harmony. Certain laws and rules helpful to such a desire, may be said to be in the borderland between physician and artist. It is wholly within the province of neither. Health is a source of beauty, but not a solitary one. We would offer certain suggestions from hygiene, physiology, chemistry and pharmacy—certain innocent devices which lend aid to the secret arts and mysteries of the toilette, by which we outdo nature at her best, and crown her highest efforts with an added glory. If we take under our special charge this, alas, too much ignored branch of study, let not our

efforts be disdained. We are mindful of the fact that "a thing of beauty is a joy forever." A knowledge of this delicate cunning will enable many a wife to retain her husband's affection, and many a slighted maiden to obtain that attention and courtesy for which her soul pines in secret.

Napoleon said of Josephine, that "she was mistress of the toilette," a remark which leads us to believe that this was not the least of the golden chains that bound the conqueror of the world at the feet of a woman.

What a fine thing it will be when women combine the freshness of youth with the intellect and philosophy of age. And such things may be. We may "grow old gracefully." But at the outset we would have our readers understand we do not promise too much. We do not come with a draught of the fountain of Ponce de Leon, which will enable the drinker to be forever fair, and forever young. It is only by selfdenial that we gain any permanent good, and, in a thousand small ways, here a little and there a little, by obeying rules of health, diet, exercise, and the mystic arts of surgery and pharmacy, our patient may learn to transform herself from homely into passible, from passible into attractive, from attractive into beautiful.

We will begin with the human form as a whole, before passing to its many subdivisions. There are certain rules, derived from a careful study of the finest living models and the most noted ancient statues, by which we shape the outlines of the human figure. We give these rules, not to discourage our readers, but simply to form a standard of perfection by which he or she may measure themselves. The height should be exactly equal to the distance between the tips of the middle fingers of either hand when the arms shall be fully extended. Ten times the length of the hand, or seven and a half times the length of the foot, or five times the diameter of the chest from one armpit to the other, should also give the height of the whole body. The distance from the junction of the thigh to the ground, should be the same as from that point to the crown of the head. The knee should be precisely midway between the same point and the bottom of the heel. The distance from the elbow to the tip of the middle finger, should be the same as from the elbow to the middle line of the breast. From the top of the head to the level of the chin, should be the same as from the level of the chin to that of the armpits, and from the heel to the toe.

Now, having ascertained by these meas-

urements how far from perfect we are, we will now proceed to see what is to be done about it. American women, as a rule, measure between five feet two inches and five feet four inches in height. Those who are much above, or under these figures, will be unpleasantly aware of the fact. They should remedy it, but how, in the name of all that's wonderful? we hear in imagination. To those who are under height we would say, that very few people sit or stand their full height. They drop all together (to use a coined expression,) in a loose, slouchy fashion, usually with one hip or shoulder higher than the other, the abdomen thrown out in ugly contour, the weight upon the heels, or the outside of one foot. Take this same figure and throw the weight upon the balls of the feet, the hips back of the shoulders, thus drawing in the abdomen and forming a straight and perfect outline, the chest swelled, the shoulders back, the head well poised, the chin slightly dropped so that the eyes meet those of another squarely and courteously, and, behold the transformation. You have a figure, which, in its lithe and easy grace, shall form a dignity which will make the beholder quite forget any discrepancy in height. The same balance preserved in walking, throws the work where it be-

longs, upon the strong hip muscles, and not upon weak backs, and will enable delicate women to walk without great fatigue, and to attain that graceful and erect carriage which is so much to be desired.

As regards sitting we would say, that we believe rocking chairs to be an abomination and a nuisance. They induce a tendency to lounge which is inelegant and injurious, as it throws the weight squarely upon the end of the spine, producing, in many cases, a nervous irritation. In a straight backed chair one sits squarely from the hips up, their full height, the weight upon the strong hip muscles again, the body well back in the chair, the shoulders straight, one foot slightly in advance ready to rise with ease, and there you are—a model of dignity, grace and comfort.

Almost any one can acquire a fine figure by patience and long practice. For example of this, look at the raw recruit when taken into the standing army, and then observe the practiced ease, the military erectness, the unconscious grace of the "old regular." This tells what training may do.

It is not so easy, one might think, to veil unusual height. In sooth, it is a more serious problem, although it is not impossible. We would have our reader

notice what a common thing it is among tall people to endeavor to hide their height by a shambling walk, and a stooping of their shoulders, forgetting the fact that a harmony of proportion does away with the impression of great height. A person who preserves a symmetry of balance, will be blessed with more or less perfection of proportion, and will get themselves styled "a superb creature," instead of "a great awkward thing." One of the most common blemishes is that of stooping the shoulders, and it is productive of a train of evils. It destroys the contour of the neck, and and the pose of the head. It throws the shoulders upward and forward, and induces consumption. And yet it is comparatively easy of remedy. A daily and regular practice of the following exercise will entirely do away with the habit in in the young, and largely correct in those with whom it is of long standing. Stand erect, with the weight thrown forward, the hand clasped loosely behind the back, and inhale slowly and gently *through the nose*, with the mouth closed. When the lungs have been filled to their utmost capacity, slowly exhale with the mouth open, consuming as much time in the exhalation as possible. The inhalation should be so deep as to move the lower muscles of the abdomen. By this

means the chest is permanently expanded, which, *perforce*, throws the shoulders back in their place. We thus kill two birds with one stone—straighten the shoulders, and fill empty air cells, flattened by long disuse.

Having thus dilated upon the human body as a whole, we will now proceed to its subdivisions, and offer what modest hints we may, as to the correction of their faults.

The neck should be one-half the height of the head, from the level of the chin to to the summit, and, at its narrowest part, should have twice the circumference of the wrist. Through the neck the great vessels pass to the brain, and the spinal column conveys the sensations from all parts of the body to the brain, where resides the intellect. Therefore it is of great importance in reading character, to the physician and physiognomist. Rounded, regular shoulders, and a full chest, are next in order. The shape of both can be greatly improved by the breathing exercise before mentioned.

The waist of a woman five feet high, *should be* twenty-five inches in circumference, and it should increase half an inch for every additional inch in height. Listen to this, gentle reader, if you are inclined to endorse that absurd and ugly fashion of lacing down to the wasp-like

waist, against which artists and physicians have so long and so vainly protested. We think, however, that later-day women have too much intelligence, and have, perhaps, suffered too much, and also the evil results of this custom are too well known to need a dissertation from us. But we cannot promise our readers health or beauty, in the smallest degree, unless we are obeyed in this particular.

The head is that part of the body which distinguishes the noble from the ignoble. It should appear as a perfect oval. Its height should be one-eighth of the whole height of the person. The greatest diameter should extend from the forehead to the back of the skull above the neck; the shortest from one temple to the other. The two hemispheres should be perfectly even, and the curve of the summit regular and even. The rule of artists for the forehead of a woman, is that it should be broad and low, but from time immemorial, a lofty brow has been the throne of intellect. The reader may thus be consoled with either one.

The face, like the head, should be oval, and, as the curve is the line of beauty, a face that is full of soft curves and without abrupt angles or sudden depressions, is more apt to be beautiful. But the

face, perhaps, more than any other part of the body, is under our control, for it is the expression (the *soul*, if you will, shining through its mortal coil,) that makes it; and sweet and lovely thoughts are very apt to make sweet and lovely faces, despite any irregularity of feature. It is a good thing to remember to keep the face in repose while talking. The habit of twisting and contorting the face to express every varying thought, is unnecessary, and is fatal to beauty. The habitual use of one muscle above another enlarges it, and leaves its mark upon the countenance. On a calm face the passing emotions mirror themselves quietly, like clouds on the surface of some unruffled lake, and gain tenfold fascination in the doing. No feature of the face is so expressive as the eye; none so important to have under control and to use to the best advantage. The eye can command empires, sway multitudes and subdue even the fierce beast of the jungle. They should be horizontal, and of a color to correspond with the skin and hair; their motion should be free, slow, and not jerky, and the white of the eye pure and pearly. It is apt to become yellow in diseases connected with the digestive organs or liver, and streaked with red in those who are given to violent fits of temper, or to excesses of food

or drink. A weak eye is rarely a pretty one, so it behooves every one to preserve the sight, for a two-fold reason. Avoid straining them by lights too bright or dim, and *never read lying down*. The eyebrows are very significant of character. They should be moderately thick, especially at the inner third, the outer extremity tapering to a point, with soft, regular hair, slightly arched, and well defined against the skin. They should never be allowed to grow together, as it is indicative of the lower emotions. If nature plays the trick upon you, remove them by shaving, or the use of tweezers. The eyelids should neither be widely separated nor half closed. The former habit gives a scared, uneasy look; the latter a sleepy, sensual expression, far from the ideal of art. All the pupil should be visible, but none of the white of the eye, either above or below it.

The mouth, the home of smiles and merry laughter, the spot where love seals its vows, and friendship offers its warmest pledges, comes next for study. It should be of moderate size, the corners symmetrical; when closed, the line perfectly horizontal; the lips well defined and rosy red, the lower lip slightly more prominent than the upper, both covering readily the teeth. Health preserves their natural carmine and softness, and a con-

tinued drying and cracking of the lips is usually caused by some disorder of the stomach or internal organs. Endless lip salves do no good in such a case. The cause itself must be reached. A chafing caused simply from exposure to the weather, can be remedied by touching them with cold cream, or a preparation of ten drops of carbolic acid, a teaspoonful of glycerine, and two drops of ottar of roses. A use of the many poisonous lip salves, to give false color to the lips, should be carefully avoided, as should the habit of sucking and biting them for the same purpose. It destroys their shape. There are many people whom mirth robs of half their good looks. They twist and contort the features, producing permanent wrinkles. The lips should part moderately, in a lovely smile, disclosing the teeth, but not the gums, and the whole face should brighten accordingly. What beauty is there in a smile, unless it discloses two symmetrical rows of "delicate little pearl-white wedges, all transparent at the edges?" There is no excuse in our day, when dental surgery has reached such a state of perfection, for bad teeth. The countless ills that follow in their train, are too well known to need mention, as is also the unpleasantness of unbrushed teeth. An offensive breath is such a serious

fault that we make especial mention of it. Many a one, who would otherwise be an engaging companion, is rendered intolerable by it. In the great majority of cases, it arises from either the lungs, the stomach, or the teeth. When the latter are at fault, they should be put at once under the care of an approved dentist. When the stomach is the cause, dyspepsia in some form is present, and requires the enlightened care of a physician. When the trouble is in the lungs, the gravity of the case is apparent, and the battle is not for good looks, but for dear life. But whatever the cause, every possible means of remedy should be taken, as we have not the least right to go about rendering ourselves objects of aversion, and we are no less with this fault. A temporary relief may be found in the following mouth wash: One tablespoonful of Listerine in a half teacup of soft water. Rinse well several times during the day.

The care of the ear consists principally in cleanliness, and this is important, as the hardening of the wax from neglect, often causes deafness. No base metal should be worn in the ears, and no gold less than eighteen carats fine, as the alloy used in lower grades irritates and inflames the skin.

The shape of the nose is often indica-

tive of race, and of all the types, the Grecian is said to be the most artistic. This has the line of the nose straight, or nearly so.

Of all the senses, that of smell is the most delicate, and due regard should be paid to this thought, in the use of odors. A faint suggestion of delicate perfume, wisely chosen, is a very charming attribute of a lady's toilette, but the immoderate use of strong odors is vulgar, and highly significant of its use as a cover for uncleanness. Sachet bags skillfully disposed about the person, are the most dainty means of scent.

The nose, as far as is consistent with keeping it clean, should be left alone. Nervous habits of frequent wiping and blowing, pulling and twitching, are very apt to destroy the shape.

We now come to the skin and complexion, and on this subject the burden of our song is, soap and water. A thorough cleansing with soap and water twice a week, and a daily bath in tepid rain-water, followed by a gentle rubbing with a Turkish towel, productive of a gentle glow over the entire body, is the best beautifier the skin can have. If rain-water is not available, water softened with borax is the next best, and tepid water is better than extremely hot or cold. To those who have sufficient

strength of constitution, the Turkish bath once or twice a month is highly beneficial, and the discriminate use of pure rice powders, slightly scented, are not injurious, and are often a protection against sun and wind. Add to these directions a proper regulation of the bowels and diet, and plenty of physical exercise in the fresh air, and you have the secret of a good skin.

In these days of manicures, good hand lotions, cold creams, etc., almost any one not obliged to perform very severe labor, can have a white, smooth hand, and pretty pink nails. But this, like every other good, is not attainable without care and patience.

The hair—that crowning glory of a woman—should be washed in soft water, with pure castile soap, thoroughly rinsed and dried, and the scalp well rubbed, once a fortnight in the summer, and once a month in the winter. This is *absolutely necessary* to keep it in good condition. Split, or otherwise injured hair, should be carefully clipped from the head two or three times a year, and every possible pains should be taken to arrange the hair artistically, and in a manner most becoming to the face and figure. It is needless to say that any attempt to change the natural color of the hair, by the use of dyes or bleaches, is an infring-

ment of nature's laws, for which she will most promptly avenge herself, in most grotesque looking, if not utterly ruined hair.

To the results of these rules, implicitly obeyed, add a soft voice, "that most excellent thing in woman," and you have that most beautiful of all things—a beautiful woman.

Guided by the laws of wisdom in passions and tastes, and in all things, *moderation*, observing scrupulously that cleanliness which is next to godliness, and we have a house for our soul, a just appreciation of which leads us to a contemplation of that Celestial Beauty, like unto whose perfect image, man was created.



SLEEPING AND DREAMING.

"To sleep, perchance to dream,
Aye there's the rub;
For in that sleep
What dreams may come."

—*Hamlet.*

Nearly a third of our time is spent in sleep, and it is comforting to know that the time is not wasted. The result of active exercise is the breaking down of innumerable cells, which must be replaced when the body is inactive. Therefore, the wonder would be if we did not sleep.

The regular work of the body is suspended during sleep, and the organs undergo a period of restoration which is requisite for future activity. In the work and thought of the day this accumulated energy is gradually distributed. Each evening finds the store exhausted.

This organized being is a self-repairing machine, but there must be recurring periods of repose. Finally, when it is no longer capable of repair, there comes

that deep sleep from which there is no awaking.

The question might be asked, why do we awake from sleep? The accumulation of nervous energy might cause it if nothing else. Habit also influences it. We allow the system so many hours for repose and repair, and it accomplishes all in the given time.

Sleep does not come upon us suddenly. We lose the power of our senses gradually, each following in succession after the loss of sight. There are also different degrees of sleep—so many intermediate steps between it and awaking, that we may be said to graduate from a deep, unconscious sleep, to a state well illustrated by the gradual change of night into day. A lightly sleeping person may answer a question given in a familiar tone, without knowing he has done so. Some have even slept on horseback, or when walking, when the muscles of the back were in motion. But in standing, the body would fall forward unless supported.

A healthy sleep is perhaps perfectly dreamless. Dreams are interesting for three reasons. They illustrate the vagaries of the mind, are the result of physical disturbances, and they resemble insanity.

It is noticeable that in all our wander-

ings through dreamland, doing the most absurd and improbable things, that there is still underneath all an instinct of identity. The surprise awakened by assuming such fantastic forms, proves that there is something deeper than physical personality. The subtleties of the mind are things almost too subtle, to be handled by the clumsy vehicles of speech. Yet, through the delicate workings of associative memory, the sudden flash of recollection, faces long dead, voices long still, between which and the present there seems to be at first no connecting link, goes to prove the unconscious something which lies above all the ordinary workings of the mind. There is a self beyond all bodily function, of which we have occasional lightning-like glimpses.

It is said that there is no such thing as forgetting what we have once attentively observed. The impression is made unconsciously upon the inner self, and there stored for future use. And from this store-house, material is furnished for many dream fancies.

Many are the ways in which memory is awakened. A picture, a story, the sweet strains of music, or a particular odor, may revive the slumbering thoughts of recent or remote happenings. And even in the silent night, we may enter

into its details more perfectly, thus re-living the past.

We experience the feelings of the day, and perform its occupations, awakening more tired than when we sought our couch. The muscles, as well as the mind, were working all night. We forgot to let go of ourselves. But this feeling can be prevented by the relaxation of the muscles. An excellent exercise is to raise the arms slowly to a horizontal position while taking a long breath, and and then suddenly drop them to the side. A repetition of this exercise with the eyes closed, will secure that lifeless, relaxed feeling needful for refreshing sleep.

The application of a hot water bag to the body, a sudden sound, heavy, or insufficient covering upon the bed, will cause dreams often distressing in their nature. This shows that part of the brain is active, while the other is asleep.

Each internal organ effects the brain directly or indirectly. Hence any disorders will cause the sleep to be labored and exhausting. It may cause the nightmare, in which we can trace a relation to insanity. Any sudden noise may cause a fear of something terrible about to happen.

Such unrest cannot assist the storing of energy, or allow a restful suspension of the organs of life. Rest is absolutely

necessary for a healthy life. The heart and lungs take a short rest between each pulsation or respiration. These intervals are longer when the body rests, although they never cease their daily, hourly, life-long task.

Scientists today say that we should live to be one hundred and ten years old. But improper methods of living, such as overeating, without proper exercise or rest, we destroy the natural workings of the human organism that supports the vital spark of life given us. Without sleep, which is nature's true rest, we cannot enjoy the benefits of judicious exercise. Rest and exercise are brothers that cannot be separated in the proper support of the body. There cannot be healthful exercise without healthful rest.

Thus it can be seen that normal sleep is probably one of the greatest invigorators of the body. Each individual is a law unto himself in regard to the amount of sleep required to make the repair needed. We know of some individuals that have done wonders upon four hours of sleep, which were enough to properly restore their physical organizations. The majority of people require from six to ten hours of perfect sleep. By carefully examining and observing the effects of sleep upon ourselves, we can deter-

mine the amount needed for the repairs that nature intends we should have. Then we should not deviate from nature's requirements. If we do, we must pay the penalty. We cannot borrow from the future without shortening our lives.

It is a well known fact that one hour before midnight is worth two after. Then the old adage, "early to bed and early to rise, *truly* makes a man healthy, wealthy and wise."

The requirements of business and society have done more to prevent "nature's sweet restorer" from doing her work than all other agencies combined. Many commercial men, authors, professional men, as well as a large class of brain workers, rob themselves of strength and ability that belongs to them, because they do not allow sleep to do its perfect work. Nature may permit this for a time, but, sooner or later, the nervous system begins to show evidences of overtaxation. As a perfect life is dependent upon a proper amount of rest, we cannot continue to overtax without bringing on a permanent deterioration or loss of our ability in whatever line of work we are engaged.

It is a common thing for people today, to enjoy what they term "outings." They overtax the body eight to ten months in the year, and then try to re-

pair it in two. It can readily be seen that this cannot be done, as the over-taxation destroys the ability of the system to make an immediate repair. Many are much improved, while others return without regaining what they expected, and others have so nearly destroyed their power to live that they cannot regain any of their strength, but continue to lose it. This is the class of people who are largely disturbed with dreams. It shows that their general and nervous system is no longer able to duly repair when she most needs it. This class are resting upon the danger line of their existence. And if the little life-force yet remaining is not improved so as to overcome all these dangerous warnings, the sleep that knows no waking will soon overtake them.

The natural way of living is to repair each day what is necessarily destroyed in life's active work, of whatever sort. Then we hold ourselves above every danger signal, and life, with all its glorious workings, we are fully permitted to enjoy.

SIGHT.

I believe that man received from the Creator perfect sight, but, through his transgressions, it has become imperfect and subject to various diseases.

There are defects in the eye that are termed "optical," which are of interest to all. The eye is a camera, subject to the ordinary laws of light; it may be perfectly sound, and still vision be not perfect. This is caused by the rays of light not being accurately focused upon the retina. The rays of light may be focused in front of it, as in myopia, or back of it, as in hypermytropia. There is perfect vision when the parallel rays of light that come from an object twenty feet away from the observer are focused sharply upon the retina. In this condition, the eye is adjusted for distant objects, and all of its parts are at rest. The cornea, aqueous humor, crystalline lens and vitreous humor, are refractive media, and, when taken together, act as a bi-convex lens, causing the parallel

rays of light to be brought to an exact focus upon the retina.

If we wished to see near objects, the eye must change to some extent, and the lens become more convex. The eye possesses the power to adjust itself for various distances. This power is termed accommodation. When the ciliary muscle contracts, the lens has the power to become more convex, mostly on the anterior surface, causing it to have a shorter focus, and greater magnifying power. This is an involuntary act that is not under control of the will.

Children with healthy eyes have good accommodation, but it diminishes as they grow older, so that at forty or fifty, it is very difficult to accommodate for fine objects at a near point. In order to see well, they find it necessary to hold everything a greater distance away from the eyes than they have been in the habit of doing. This condition of the eye is termed presbyopia, or old sight.

From what has been stated, we learn that divergent rays of light, coming from a near object, are brought to a focus on the retina by increasing the convexity of the lens. When the substance of the lens is soft, this can be more readily accomplished than when the lens becomes denser, as it does in advanced life. Now it can be readily un-

derstood why it is, when the lens becomes hard so that it is not able to increase its convexity, that objects near to the eye cannot be seen. If we hold the object the proper distance away from the eye, so that the rays of light are not as divergent, the lens will have convexity sufficient to focus the rays on the retina. It has been stated by high authority, that presbyopia has commenced as soon as the near point is further than eight inches from the eye. This statement is of no practical value. Presbyopia has commenced when the person finds that he can no longer use his eyes with ease for near work, at the distance which he has always used them. The first symptom of old sight is usually when the person cannot see to read fine print by artificial light. Soon there will be noticed a sense of strain in using the eyes for near work. This straining sensation is caused by the over-exertion of the ciliary muscle to produce the required amount of convexity in the crystalline lens. Some people believe that this discomfort should be borne as long as possible, and that the eyes are weakened if anything is done to relieve the strain. We find the reverse of this is true, and that presbyopia will increase more rapidly when glasses are not worn, than when the correcting lenses are used. In obtaining

glasses for the presbyopic condition, it is best to choose the glass which makes ordinary print plain at the usual reading distance of the patient. Every glass should be accurately fitted to the eye, so that they will not prove a source of danger to it.

It is unwise to contest with age, and I think we would be acting the part of wisdom to yield gracefully. Then, when it is no longer possible to read with perfect comfort without glasses, their use should be commenced. Hypermyopia, or long sight, is caused by the eye being too flat; that is, the eyeball is not long enough from the front to the back portion. On account of this flatness of the eye, the rays of light do not focus on the retina, but some distance back of it. This condition should not be confounded with presbyopia, which, as we have learned, affects the near point of distinct vision, causing it to be removed further from the eye, while in hypermyopia, both the near and far point is involved, so that there can be no distinct vision at any distance, without more or less strain on the eyes. This strain on the ciliary muscles is so great that a condition of weak eyes is frequently developed. This condition is often seen in young persons. Whenever they read, write, or do any fine work, the vision is at first perfectly

clear, but soon, if they are reading, the letters begin to run together, and the sight becomes dim, making it necessary to stop work for a short time, until the eyes regain their strength. If the eyes are constantly used, a feeling of aching will be felt across the brows, which will frequently be followed by a severe headache. Sometimes the eyes become quite red, nausea and vomiting come on, and the patient is considered very sick.

The condition of the nervous system should be noticed in all cases of hypermyopia. Children, or adults with a weak, nervous system, cannot endure even a small amount of this trouble without great suffering. Some months ago I saw a marked case of this kind. A number of distinguished physicians in the east said that he was suffering with a serious disease of the whole nervous system. His eyes troubled him very much, especially if he read any length of time. His vision was perfectly clear at first, but after he had read a few minutes, his eyes would become blurred, misty, and sometimes vision would be gone entirely for a few moments. The nervous disease became very much better soon after he commenced the use of the proper glasses.

Nearly one-half the children of this

country have hypermetropia. Five hundred and twenty-three school children out of eight hundred and ninety, were found hypermetropic. Some of these children are considered dull, and very poor students. Parents are sometimes quite severe with their children because they do not study better, and keep up with their classes. I have seen children that were obliged to leave school on account of headache, fatigue, irritability and mental confusion, that would come on after studying for a while. Many of these children never get an education, because "going to school does not agree with them." The majority of them can go to school and keep up with any class, if their hypermetropia is properly treated.

The use of the correct convex glass is the remedy for this trouble. By using these glasses, the parallel rays of light will be made converging before they enter the eye, so that the muscle of accommodation is relieved of its extra work, and the focus is brought forward on the retina, which gives natural and easy vision.

Myopia, or short sight, is caused by the eyeball being too long from front to back, so that the rays of light come to a focus before reaching the retina, or some distance in front of it. The posterior portion of the eye is pushed too far

away from the anterior, so that there is an elongation of the axis of the organ. In some cases the eye, instead of being round, becomes egg-shaped. This trouble is one of the results of advancing civilization, and is seen more frequently in old countries than new. It is seen more among students and literary people, than among laboring persons.

Myopia is very prevalent in Germany, and it is impossible to fill the ranks of the army with men who can get along without using glasses. It is not often observed among farmers and seamen. I am informed by a responsible party that Indians are never short-sighted. In most cases there is thought to be a hereditary tendency to short sight. It may originate from abuse of the eyes, and be increased by close work. That it is transmitted from parent to child, is shown by its greater prevalence among those who use their eyes constantly. During childhood, when the eyes are growing and the tissues are changing, short sight will increase to some extent, even with the best of care. We find a large amount of myopia developed in the schools. Dr. Cahn, of Breslau, examined the eyes of more than ten thousand school children, and found the percentage of short sight increasing from year to year. The following table shows

the average increase per cent. in each department: Elementary schools, 6.7 per cent.; intermediate schools, 10.3 per cent.; high school, 19.7 per cent. We find the same thing in this country, and it is time some active measures were taken to prevent the sight of the American youth from being lost to such a large extent. But few school houses are properly constructed to save the sight. Dr. Wells says: "There can be no doubt that the degree of myopia is often greatly increased during childhood, by long-continued study, more especially by insufficient illumination, and a faulty construction of the tables or desks at which pupils read and write. An insufficient illumination necessitates a close approximation of the object, which gives rise to a straining of the accommodation, and congestion of the eyes. A faulty construction of the tables, or the distance between the latter and the seats, is also injurious, by forcing the children to stoop." Dr. Cahn said: "I could distinctly trace the increase in the proportion of the myopia, according to the construction of the desks, and the lighting of the school rooms."

It is thought by some that shortsighted eyes are stronger than others, because they can see small objects very distinctly, and can read after middle age

without glasses. This is an error. A myopic eye is almost always an unsound one. The real defect is a bulging backward of the sclerotic or outer coat of the eye, which yields more readily as it becomes thinner by stretching. Anything that causes an extra flow of blood into the eyeball will increase the pressure and force the weakened sclerotic further back. The stooping position that children are obliged to take because of the faulty construction of seats and desks in most of our school houses, will cause an increased flow of blood into their eyes, and, consequently, an increase in their myopia.

The choroid and retina are injured in following the sclerotic as it is forced backward. If the bulging backward of the sclerotic goes on rapidly, as it does in some cases, the retina will be detached from the choroid, and forced forward into the vitreous humor, where it can be seen in loose folds. Sight is now lost. This is the course of a rapidly progressive myopia. This can usually be avoided, still it should be borne in mind as possible.

Myopia, especially in a high degree, is a serious affection, and requires careful and skillful treatment. In this trouble, parallel rays of light must be made divergent before they can be focused on the

retina. By using the proper concave glass, we can obtain the desired result. It is very necessary that a short-sighted person be accurately fitted, as much harm may be done by wearing the wrong glasses. It may be well to remember that myopia may cause the eye to turn out—strabismus divergeus, while hypermetropia will cause it in some cases, to turn in—strabismus convergeus.

In hypermetropia, the strain on the accommodation causes an excessive tendency to convergence, which terminates in a permanent turning inward of the eye. This kind of squint or cross-eye, usually commences in children from two to five years of age. It will be noticed first when they are looking at some near object; soon it will occasionally occur when they are looking at distant objects; finally one eye remains permanently turned in. It is a popular idea that squint is caused by whooping cough, measles, convulsions, etc., but they act only to reduce the patient, so that the strain of the hypermetropic condition cannot be borne.

When there is a want of harmony in the action of the external muscles of the eyeball, the rays of light that enter them will not focus on the same point on each retina; on this account we have double vision, or see objects double.

This is termed diplopia, or double sight. Prismatic glasses may be used to correct this trouble. If the glasses are not used, the person will learn to suppress the image on the retina of the squinting eye, to avoid the annoyance of double sight, and on account of the non-use of the squinting eye, the sight will be impaired; in some cases, accurate vision is lost, even though the eye looks healthy. Squint that comes on suddenly is usually the result of paralysis of one of the external muscles of the eye, and may be the result of some brain disease.

Astigmatism. Every eye is more or less astigmatic, but in some eyes the degree is so slight that it does not cause any trouble. When there is a want of uniformity in the curvature of the cornea, astigmatism exists. The cornea may be too flat in the vertical meridian, or from the upper to the lower portion, so that the rays of light will focus back of the proper point. While from right to left it may be too bulging, causing the rays of light that pass through this portion to be focused in front of the retina. One portion of the cornea may be correct, and the other myopic or hypermetropic. Astigmatism may be complicated with hypermetropia or myopia, which makes vision quite uncertain. Children with myopic astigmatism are apt to be

dull, and slow about learning. The use of the proper cylindrical glasses by these children will brighten their intellects, and cause them to see nature's beauties with much better satisfaction. One eye may be long-sighted, and the other correct; one eye may be short-sighted and the other long-sighted, so that the myopic eye may be used for near objects, and the other for distance.

Asthenopia or weak sight, is any condition in which the eyes cannot be used for a time without more or less pain, fatigue, or other bad symptoms. The eyes are unable to bear the strain of continued application to close work. Asthenopia may result from any of the optical defects that have been described above. In some cases the eye symptoms are very mild, in fact, not noticed, but the strain is manifest by nausea, dizziness, headache, and general nervous irritability, which may excite some fears with regard to the health in the future.

Weak sight may come from bad general health, especially if it is of a nervous character. Now and then we see a case that the sensibility of the retina is easily exhausted, so that objects looked at for a short time seem to fade away. The muscle of accommodation may act painfully or irregularly, so as to not allow much use of the eyes.

INSANITY.

The question of insanity is one that has more interest for the world at large, than is generally accepted by the public. Standing in this light, it has two sides, one appealing to the amount of philanthropy that may have been developed in our modern civilization, and the other, to our common selfishness. That insanity is increasing, rather than diminishing, is a fact familiar to all, and the latter motive alone, should lead us to consider it. An insane person has lost his mental capabilities, and is unable either to care for himself, or earn his living.

Undoubtedly one of the first causes of insanity is defective natural organization, and a very slight degree of mental impairment is sufficient to reduce such a person to the level of dependence. It is rather the exceptional circumstance when persons of extraordinary capabilities become insane, and then it is under exaggerated circumstances.

It is an undeniable fact that any individual with brains is liable to become deranged, but, fortunately for the majority of us, ordinary provocation is not sufficient to overthrow our mental mechanisms. Now a great number of active and apparently capable business men go down with paresis, which would seem to belie our above statement, but if these cases are carefully considered, they will be found to belong to a class liable to become insane, because of inherited peculiarities, and because they are prone to the indulgence of habits, more than ordinarily provocative of brain disease. "Whatever improves the physical qualities of the brain, improves also the mind; whatever deteriorates the brain, impairs the mind." The brain, like the body, has its changes of waste and repair, only the process is conducted with twice the rapidity that it is in the body, and upon this the mental condition is vitally dependent. If the circulation of blood through the brain is lowered, mental activity is diminished; if accelerated, the mind's action is quickened. Much thinking exhausts the brain, as much activity exhausts the muscles, and to go on thinking, or attempting to think, after the brain is thoroughly tired, and without giving it time to recuperate, is a prominent element in causing insanity.

An author has said, that diseases of the brain are "perverted physiological actions." There is a misleading theory afloat in the minds of many, which has been productive of much evil, that the mind is a vague abstraction, connected in some unknown way with the body. This view excludes the idea of physical relief, which is the only way to approach the disease, and puts it in the light of a supernatural possession of evil spirits, etc.

A healthy and normal brain requires a healthy and normal body, and depends upon due nutrition, stimulation and repose. An interruption or clogging of these processes, results in all sorts of disturbances. The brain is the most delicate and complex of all the organs of the body, and consequently all of its manifestations, whether of order or disorder, will be varied and complex also. The causes of its impairment may be regarded as moral and physical, and predisposing and exciting. The moral causes are those resulting from worry, overstudy, overwork of any kind, and great griefs. The physical causes act directly upon the system, as blood poisoning, by fever, narcotics, or an injury to the head. Predisposing causes act remotely and slowly, to undermine the mental health, and exciting causes are those shocks

which usually precede the breaking down of the mind. People commonly make the mistake of blaming the immediate shock or calamity for the outbreak of insanity, while in reality the cause is much further back, and the event in question is only the *occasion* of its development. The germ of insanity may have been deeply latent, and a long train of influences may have been at work to impair the cerebral vigor.

The human mind does not snap like cast iron. Insanity is seldom or never produced from a single cause. Only by a "conspiracy of conditions," internal and external, proximate and remote, is the delicate fabric of reason usually overthrown.

The structure of the brain consists essentially of millions of little cells and fibres; the former the generators, and the latter the transmitters of force. In thinking, these are called into exercise, and according to its intensity, exhausted. And their functional power is restored by *perfect* nutrition. We attribute a large share of mental disease to an imperfect nourishment of the brain, which produces derangements of its structures, and these take many forms of cerebral disease. Nutrition is the result of a relation between the nerve tissue and the blood. Its perversions, therefore, are to

be found in disturbances of the circulation, as well as the nerves.

The supply of blood to the brain must be good in quantity and quality, in order to furnish its minute blood vessels, which imparts to the cells the material of their renewal and waste. Excessive mental activity sends an increased flow of blood to the brain, and if this is prolonged beyond a certain limit, congestion follows. There are few brain workers who have not felt the primary symptoms of this. Deep in thought, the student's head becomes hot and painful, and his brain feels too large for his skull. An hour's recreation or freedom from thought before going to bed, would enable the partial congestion to recover, and secure the much needed sleep, which, otherwise, is apt to be disturbed and unrefreshing. This should be avoided as much as possible, as the tendency is to permanently impair the organ.

The opposite state from the one last mentioned, Anaemia or bloodlessness, powerfully predisposes to insanity. It implies a poverty or dilution of the blood, and may be caused by imperfect digestion, or any of the many influences which impair the nutrition. This is apt to develop in persons of a scrofulous tendency, and produces an irritable weakness, excitable emotions, etc., the

action of the blood being powerless and irregular. Headaches, giddiness, low spirits, hysteria, neuralgia, and even epilepsy follow in its train.

The blood, in a state of health, is kept in exquisite balance of harmonious action, producing perfect thought and emotion, but foreign substances and bodily impurities being introduced into it, the result may be anything from a gentle excitement to the most furious delirium. The presence of bile in the blood, for instance, will generate so many gloomy thoughts in the mind of a patient that he approaches desperation, although, curiously enough, he knows, too, their origin.

This state of affairs prolonged, will result in genuine insanity. The poor brain is the one organ of the body which has no escape from overwork. If we overload the stomach, appetite is lost, and the task is no longer imposed. If we overstrain the muscles, the injury is thrown upon the nervous system. The overtasked lungs throw part of their burden upon the skin and liver, and the liver upon the kidneys, but the brain has no such relief. Exhaustion, continues exhaustion, till the most fatal results are reached. "Night, darkness, and silence, alternate with light, stimulation, and day."

The evil effects of insufficient sleep are well known. A deep, dreamless, happy sleep, is the over-burdened brain's sole chance of life. Its absence gives rise to irritability, peevishness, dissatisfaction, dejection, lassitude, which the best self discipline can scarcely control.

Want of proper sleep is one of the most direct causes of insanity. Among its remoter causes, is that of hereditary transmission. There is perhaps no constitutional defect more markedly hereditary, than morbidities of the nervous system. The common belief that insanity is inherited only when insanity in the parent appears as insanity in the child, is a serious error. It is transmitted in an endless variety of infirmities. A nervous defect in the parent may appear in a descendent of the second generation, perhaps, in an unbalanced character, which develops violent outbursts of passion and unaccountable impulses, or breaks into insanity in a sudden emergency, while perhaps an immediate descendant of the first generation may go smoothly through life without exhibiting peculiarities of any kind. Sometimes a whole family seem fated to organic decay, and where there is a strong predisposition to insanity, one member will suffer from some form of nervous disease, another from epilepsy, another from hysteria,

while another may commit suicide. There is no doubt that debilitated stock is a great source of criminality. Our jails and prisons are filled with unfortunates, who, starting in life with low organizations and defective brain power, grow up among the lowest and most vicious surroundings, and so are fairly trained for their career of crime and misery. The baneful connection of criminals with the social world is a familiar horror, and in our schemes of reformation, we should not overlook the physical agencies which determine the efficacy of the brain, while bringing to bear upon them the kindly influences of education and religion.

The simple state of the savage, stoical, steadfast, fearless, with few emotions and fewer tears, is rarely or never productive of insanity. The complex emotions of our civilized life, and the nervous tendency to indulge them on public and private occasions, is provocative of much mischief. Worse than all, our education, instead of being a training to self-control and systematic discipline, is conducted under the spur of competition and public examinations, and public applause, in the place of quiet and solid attainment, for attainment's sake. The victims of overtasked intellects and overstimulated brains, fill the asylums.

Probably six hours a day of close brain work is all that the organ will endure without detriment, yet how many comply with this rule? Of all the calamities to which man is liable, none is so appalling as the loss of reason. Yet it does not come unheralded, nor should it be regarded in the light of a fatality from which there is no escape.

The many active symptoms of mental disease may be noticed, and often the dread horror may be circumvented if taken while yet there is time. "There's the rub." A false notion of delicacy impels the friends of the majority of patients predisposed to insanity to make a mystery of it, regard it as a disgrace, conceal the conditions of it, and so neglect the first dictates of common sense, until the golden opportunity has flown, and it is forever too late to treat, dictate or advise.

The majority of cases of insanity are curable. If the proper methods are followed, all cases that have not true organic disease in some form, can recover.

HEART DISEASE.

During a practice of nearly a quarter of a century, I have been watching what may now be very justly styled the American heart. It is very proper that the people should know more in regard to this subject, especially when every one should be deeply interested in so vital an organ.

In many instances, the State and Nation have been shocked at the sudden deaths of some of their best men and women, from diseases of the heart.

Every well informed physician will tell you that the heart does not become diseased at once. On the contrary, its development from a healthy into a diseased organ, is a slow process. They will also tell you that these conditions may be detected and carefully cared for, so that fatality, when it comes, may spring from an entirely different affection. But too often the heart is allowed to wear out, and we are pained to read in the daily papers, of the death of another citizen.

It might be asked, why are these people stricken down in the prime of life, and, possibly, of their usefulness? No chance is allowed to give any parting words to loved ones or friends. In many instances the deceased looked well, and appeared to the ordinary observer, in the best of health. When an investigation is made, it is rarely that we find that the diseased condition has been detected early enough to prevent death from claiming an untimely victim. How often do we read in our papers something like the following: "He sailed with a happy company, from Philadelphia, on the 15th, in the very best of health. He stood the voyage well, but during the first night after landing, he was stricken with heart disease, and died."

To "forewarn and to forearm," is the object of this chapter. I shall call attention to the indiscretions of life which give rise to certain forms of this malady. I shall also show how patients afflicted with organic heart disease may, by their own efforts, prolong their days, and, in many cases, live to a good old age very comfortably. I wish to make plain some of the causes of heart failure resulting in immediate death in many diseases. An intelligent explanation of some of the most common forms of heart disease will, I think, be appreciated by every

reader. The public generally, has an idea that there is but one form of heart disease, and that invariably fatal. This idea, however, is entirely erroneous, as many grave forms are entirely recovered from.

A careful study of simple enlargement of the heart, has proven that this is not a diseased condition, but is nature's method of overcoming some one or more obstacles to the blood current, either in the heart or blood vessels, and if a disease of the valves should develop, the greater strength of the organ will often do the work quite easily, and the person live to a good old age. The majority of people supposed to be suffering from heart disease, are in reality not affected with any disease of that organ. Most persons, imagining that they have heart disturbances, have other organs affected that interfere with its natural workings, and we have what is generally called functional heart disease.

For convenience, I will divide diseases of the heart into two classes. Those originating from an inflammation of the lining of the heart, and those originating from without, or diseases of the body of the organ. The first class is common to all periods of life, but occurs more frequently before maturity, and involves the left side of the heart, which is di-

vided into two parts by a valve. This inflammation is a complication following many acute diseases, and the same acid poison that helps develop them, irritates also the lining of the heart. The acid matter that causes rheumatic fever or inflammatory rheumatism, injures the heart more than any other cause. More than one-third the cases suffering with the last mentioned disease, have inflammation of the lining of the heart, as a complication. It is not long after the lining membrane becomes diseased, before the valves are affected also, and become deformed, which prevents them doing their perfect work, and we have "valvular disease of the heart" as a result. Any patient suffering with this is crippled, but if the health is kept good, all indiscretions avoided, and they follow an occupation that does not require much physical strength, life may be prolonged in comfort for many years.

A noted author says: "All are liable to diseases producing this form of heart lesion, whether their lives are good or bad, discreet or indiscreet, but not equally liable by any means. A good and discreet life adds to the resisting power against disease producing influences, and to the powers of endurance, while a bad and indiscreet life reduces the vitality and resisting power. Those

following the latter course are much more liable to suffer by exposure to infection, or poison in the blood, to sudden change of temperature, and to other malignant influences."

The second class of heart diseases, or those which develop outside of the organ, are generally the result of hereditary causes, or irregularities of living, and can as a general rule, be prevented. If they are detected before established, they may, in some cases, be checked, and the morbid condition cleared away. Fleishy people suffering from short breath and palpitation of the heart, and having pains in that region are readily alarmed, and imagine themselves in danger, but I am glad to say that the majority of these people are safe, and have no cause for fear. It is well to remember that fleshy people do not always have a fatty heart, although its action may be obstructed by too much fat. Much has been said about fatty degeneration of the heart, or a condition in which the muscles of the organ are changed into fatty substance. This generally occurs where the blood is poisoned and the parts imperfectly nourished, or the blood vessels carrying the blood that nourishes the heart, may be obstructed and diseased. By proper management, the larger portion of people suffering in this

way may be improved, and many may be cured.

A diseased heart may suddenly stop, owing to a shock, a fit of passion or over-exertion. A sudden change from the recumbent to an upright position will produce the same result, or a chilling of the surface of the body, which throws nearly all of the blood into the heart. If the heart walls are weakened from any cause, death may take place during an attack of angina pectoris, or neuralgia of the heart. Any person with a sound heart may have repeated attacks of angina pectoris, without any real danger.

Neuralgia of the heart is a transient disease of the nervous system, caused by an irritation of the nerve centers, from which proceed the nerves supplying the muscles of the small arteries of the heart. This irritation causes the arteries to contract and throw the larger portion of blood into the heart, producing over-distension and over-taxation. It will thus be observed that if the heart is weak or diseased, it might fail in its struggles, and stop with its cavities full of blood. Neuralgia of the heart can be prevented by proper living. People who live up to the laws of life, and having a perfectly pure and healthy system, never have this disease. A heart that is overburdened with flesh will be caused much

over-work to handle the increased weight. Generally speaking, life is in no way endangered by this condition. The superfluous fat is readily removed under proper treatment and diet.

When the blood vessels supplying the heart with nourishment are diseased or obstructed, we have developed the most incurable condition that is seen. The heart having no proper support, becomes very much weakened, and its bad condition comes to the front at once, in cases of fever, debilitating diseases and severe surgical operations.

While I do not believe in the too frequent use of the term heart failure, yet, in the above mentioned conditions, true heart failure does take place. In aged people, the walls of the vessels often become diseased, and if this occurs in those near the surface of the body, the blood will be forced into the heart and larger internal blood vessels, causing them to be more tense than is normal. The heart to overcome this condition, beats with greater force, and finally enlarges to become strong enough to overcome the obstruction. The increased pressure on the internal vessels, stretches them to their utmost capacity, and weakens them so that when the heart recovers strength, and sends the blood with greater force, the weakened points are

apt to give way. If a blood vessel bursts in the brain, we have apoplexy or a stroke of paralysis. If the arteries in the nose become debilitated, there will be repeated attacks of hemorrhage from the nose, or, it may be, from the lungs. I have often seen people spit blood from the lungs from this cause.

Violations of the laws of health, such as over-eating and drinking, etc., and everything that injures the system, are the causes of the condition just related, and if we wish to keep clear, we must obey the laws of life. If we are on the way to trouble, the thing to do is to call a halt, and mend our ways.

In cases of inflammation of the lungs and pleurisy, the heart has extra work to do to overcome the results of the inflammation, and being itself partially exhausted by fever and diseased blood, may fail to do its work until the disease gives way, and if it gives out, the patient dies of true heart failure. In all cases where the heart is weak, the system does not get its natural quantity of blood, and it fails for want of nourishment.

Heart disease resulting from disease of the blood vessels, is generally seen in middle and advanced life, and can be avoided by proper living. Rheumatism, want of exercise, and over-ingestion of food are the common causes of every

form of heart disease. It must be remembered that the heart must work constantly, and it is true that excessive physical and mental work does cause prostration, and puts the nervous system into a state of exhaustion, which prevents it from furnishing the heart with nerve force and muscular power. Only temperate people that work moderately, eat moderately, sleep moderately, and observe in *all things, moderation*, can have any certainty of a long and healthful life, and, finally, a quiet and peaceful death.

Many people suffer with heart disease in imagination, when they are alarmed or worried over any occurrence. This condition is a nervous affection, and soon develops what is termed "irritable heart," which is a constant annoyance.

How can we live so as to have good acting hearts and prevent sudden deaths? I cannot better answer this question than to quote from an esteemed writer: "1. That alcohol, even when used within the limits of temperance, is prejudicial in its effects on the heart, and should be avoided. 2. Do not take to excess any kind of food, especially meats. 3. Be active, and take a proper amount of physical exercise in the open air. 4. Avoid mental strain, and too close attention to business. Eat regularly, that

you may not contract dyspepsia, and lose appetite and ability to sleep. 5. Take exercise without fatigue, food without stimulants, and amusement without excitement."



INFANT FEEDING.

As the future of our nation depends upon our babies, and our babies upon good digestion, and good digestion upon their proper feeding, we think no more important subject can engage our attention.

First in point of excellence, of course, is the mother's milk, on which the infant should be fed exclusively, up to the age of one year. A child should never be weaned during the hot months unless there is some unavoidable reason for so doing. A gradual process of weaning is preferable to a sudden discontinuance. If the mother's milk is not available, substances most closely allied to the human milk are the most favorable, and these are not gained through using condensed milk and the prepared foods. We believe that the use of these articles if they give proper strength and nutrition, is also accompanied by some disadvantages, usually constipation, a chronic weakness of the digestive organs, etc.

At an advanced age, they may perhaps be used with advantage, but not as the sole diet of young infants.

We have, then, cow's milk, sterilized, and mixed with boiled water, and lime or barley water. Those to whom a sterilizing apparatus is not available, can get the same effect at home, in the following fashion. Good milk should be obtained if possible, and while it is still fresh, it should be placed in a thoroughly cleansed glass bottle, and a piece of clean cotton cloth put in the place of the stopper. It should then be placed in a kettle of cold water, which should be brought to a boil slowly, and allowed to boil thirty minutes. When cooled, the stopper should be replaced, and the bottle kept on ice until ready for use, when it should be slightly warmed. A teaspoonful of lime water to two ounces of the mixture, should be used. To guard against constipation and aid digestion, barley water may be used instead of pure water, for dilution. The barley water should be prepared as follows: Take an ounce of barley in the whole grain, wash thoroughly with cold water, and boil in about half a pint of water for five minutes, and throw this liquid away. Then add two pints of boiling water, and boil down to one pint; strain this, put in a clean, tight bottle, and

keep on ice until needed. The following table for dilution will be found useful:

AGE OF INFANT.	PARTS MILK.	PARTS WATER.
1 month,	1	3
2 months,	1	2
3 months,	2	2
6 months,	3	2
9 months.	3	1
12 months,	6	1

If the child cannot handle cow's milk, (as some cannot) the following recipe may be used:

3 tablespoons rich cream,
 2 tablespoons pure fresh milk,
 10 tablespoons boiled water,
 3 $\frac{3}{8}$ drachms milk sugar.

This mixture should be sterilized thirty minutes, like the cow's milk, following the same directions. It should be kept tightly corked, on ice, and warmed a little for use.

No two babies are alike as regards the capacity of the stomach, and under no circumstance should the amount of food exceed that capacity. A New York physician says that "more babies die of over-feeding than under-feeding." A little cool boiled water will often stop their crying and quench their thirst. Except when very young, they should not be fed at night, and they should be fed at regular intervals.

The following table, giving the ratio

of ages and amounts, may be referred to with good effect :

AGE.	INTERVALS.	AMOUNT.
1 month,	every 2 hours,	1 oz.
2 months,	every 2 hours,	2 ozs.
3 months,	every 2 hours,	3 ozs.
4 months,	every 2½ hours,	4 ozs.
5 months,	every 2½ hours,	5 ozs.
6 months,	every 2½ hours,	6 ozs.
7 months,	every 3 hours,	6 to 8 ozs.
8 months,	every 3 hours,	6 to 8 ozs.
9 months,	every 3 hours,	5 to 8 ozs.
10 months,	every 3 hours,	6 to 8 ozs.
11 months,	every 3 hours,	6 to 8 ozs.

If the infant does not digest its food well, the following preparation of Maltine may be used with benefit. This mixture should be used with fresh or sterilized milk, in equal proportions: Beat one heaping teaspoonful of flour with half a medium-sized coffee cup of cold water, till perfectly free from lumps. Add this to one and a half cups of boiling water, in the inner vessel of a double boiler. (A tin vessel inside of a tea kettle may be used for a double boiler.) Stir well, cover, and cook for ten minutes by keeping the water boiling in the outside vessel. Take out the inner vessel and add to contents one and a half cups cold water, then mix in a scant teaspoon Maltine plain, and stir thoroughly with the same teaspoon, cover, and let stand fifteen minutes. Then put the inner vessel

back into the boiling water, and cook for fifteen minutes. Strain, and keep well covered in a cool place. In case of diarrhoea, use two cups of boiling water instead of one and a half, cool off with one cup of cold water instead of one and a half, and allow to stand three minutes instead of fifteen.

These directions must be strictly followed, or the flour may not be properly prepared for the stomach of the baby. Barley flour may be used instead of white. The nursing bottles should be kept especially clean after each using. The bottle should be rinsed first with cold water, and then with hot soapsuds. It is well to have a number of bottles, and to keep them soaking in soda or borax water when not in use. The long rubber tubes with attached nipples should never be used, as they can not be kept sufficiently clean. The dark rubber nipples which fit directly on the bottle, are the best, and these should be turned inside out once a day, and thoroughly brushed. They should also be kept soaking in borax or soda water.

There are many farinaceous foods prepared for the use of infants and young children, and of these, Mellin's, Nestle's and Ridge's foods and Malted Milk are perhaps among the best.

FOODS.

Food is the material which adds weight and strength to the body. If there be not sufficient nourishment, the body loses in substance; if the amount of nourishment is equal to the daily waste, a happy equilibrium is preserved, and if it exceed the demand, no beneficial result is reached; on the contrary, much harm is produced.

The most important element in food is oxygen. Three-fourths of the human body is oxygen, and it is present in different forms, in air, water and food. It is also the essential of fire. Fourteen different elements of the earth are required to make the human body, and thus the life-principle in food is from the earth. This is an important thing to remember in the consideration of food, which is divided into two classes—that proceeding from animals or meat, and that produced from vegetation. The meat of animals fed on vegetable substances is alone fit for use.

The above mentioned fourteen elements

of which the body is composed, are as follows: Oxygen, carbon, hydrogen, nitrogen, calcium, phosphorus, sulphur, sodium, chlorine, fluorine, iron, potassium, magnesium, silicon. It is essential that every seeker after health should know what foods and combinations of foods contain these elements and their combinations, which are seventeen in number. All fourteen of these primary elements should be taken into the system every twenty-four hours, as a deficiency of any one of them produces mischief. Yet how few of our men and women know anything of the nature of foods or their properties, good or bad.

To arouse a more intelligent attention to this subject is the purpose of this chapter: Three general divisions may be remembered: 1. Phosphorus, which furnishes the vitality, including brain, nerves and bones. 2. Nitrogen, which supplies the muscles. 3. Carbon, which makes heat and fat. These three elements have their proportion, and should neither be deficient nor in excess, and it is the duty of every intelligent person to learn this proportion, and how it is contained in the common articles of daily food. Each organ of the body draws the element peculiar to its existence, from the general mixture of elements, which are taken into the circulation. So long as

the fourteen elements are organized from pure vegetable matter, they are in a perfect state, and perfect health results, but if foreign matter enters into the system, rebellion follows.

There are few single foods which contain together carbonates, phosphates and nitrates. Whole wheat, however, is one of these. The nitrates are found in the outer shell, the carbonates in the main portion, and the phosphates in the germ. It will thus be seen that fine wheat flour that is made from the center alone, consists almost entirely of carbonates, and it is a common error of families to use heat-producing foods in excess, without the balance of nitrates and phosphates. The result of this is a tendency to inflammations, headaches, fevers, neuralgic pains, defective teeth, weak muscles and shattered nerves, and this due simply to ignorance upon the subject of proper combinations of foods.

The steady use of white breads, butter, sugar, potatoes, rice, etc., carbonaceous or heat-producing foods may be offset by lean meats, milk, cheese, fish, peas and beans, containing nitrates and phosphates, giving strength to the muscles and brain. Whole wheat bread will sustain life indefinitely, while it is estimated that a person could live on white bread for about two months only, providing

no other food was used. Cracked wheat taken with milk and sugar, is a perfect food, as it also farina, taken in the same way. Rye is not so perfect a grain as wheat, but, used with nitrogenous foods, such as meat, etc., it is valuable, especially to people who are constipated. The white corn that is found in the South, comes next in the line of grains. It furnishes food to the muscles and brain, and has a small proportion of heating properties. The yellow corn of the North, however, is the reverse of this, as it abounds in carbonates, and should be used very cautiously, as it overheats the blood. Sugar, butter, lard, or animal fats of any kind, will not sustain life longer than from twenty to thirty days. These belong to the carbonates. On the other hand, the nitrogenous or muscle-making foods before spoken of, are incapable of sustaining life without some carbonates to produce warmth in the body. Shell-fish, lean meats, active fishes, birds, etc., which give vital energy to the nerves and brain, contain too large a proportion of phosphates for the ordinary duties of life. Thus the most necessary of the fourteen elements should be taken in the smallest proportion. Fruit, berries and green vegetables, are apt to produce more waste than nutrition, and, while taken alone,

especially in the summer, they cause bowel trouble, yet, taken in connection with more dense foods, they serve to keep the system cool and free from surplus.

Food which is easily and rapidly digested, does well for delicate stomachs, and people who are not active in their habits, but people of strong, muscular work, need foods that have more staying power. The digestive organs need to be given their full capacity of work to perform, as they are formed for that purpose, and they grow strong by the means, but if they have more put on them than they can possibly manage, they flatly refuse to do anything, and then chaos follows.

A person who has his own best health interest at heart, will make it a religious duty to study minutely just what his digestive organs can or cannot do, and then obey them to the letter.

Cheese is very nutritious, but must be taken in small quantities. A person living on nothing but cheese, would soon reduce his stomach to about one-seventh its natural size, which would reduce the secretion of gastric juice, as distention of the stomach is necessary for this process. Rice is a safe food for invalids, being of easy digestion, but it is nearly all carbon, and, used as a diet, produces an ener-

vated body and brain. Beans contain the three vital elements in excellent proportion, and support either hard brain or muscle work for a considerable length of time. The difficulty lies in the fact that they require strong stomachs to digest them. It is said that "a pound of beans will do nearly as much muscle work as two pounds of meat or whole wheat, and fully as much brain work." They should be eaten with bread and butter or fats, to gain the heat production. Peas are easier of digestion, and fully as valuable. Oatmeal is very strong in muscle and brain-producing material, and can be put to excellent uses, but it should never be eaten as a mush. It should be used in the thinnest of gruels, and should be cooked for hours. Taken in great strength, it is rank poison to some, and, in fact, the majority of constitutions.

Two per cent. only of the nutriment taken into the human system should be phosphorus, except in cases of people whose lives run to great and continued mental activity. Salt is chiefly useful in exciting the gastric juices. Buckwheat is so great a producer of animal heat that it gives rise to divers ills in the way of skin eruptions and bad blood. It should be used in great moderation, and infrequently, and should be accompanied

with nitrates and phosphates. Barley is probably one of the best foods for brain workers of sedentary habits, that we have. It nourishes the brain and keeps the bowels sufficiently active. Prize fighters and men who engage in contests of muscle, use barley bread exclusively. The best way of eating it, is in a porridge, eaten with milk. "The muscles of beef and mutton contain the same elements as human muscles, and are therefore adapted to nourish them." Thus we infer that the flesh of beef and mutton, used with barley, forms an ideal diet. It is an interesting fact to note, that the flesh of animals who exercise much, furnish the most strength to man, and this extends even to the part of the animal most exercised, so that a round steak, usually cast aside as the poorest part of a steak, in reality contains the most strength, and a tenderloin the least. On the same basis, the white meat of turkeys and chickens contains little nourishment, and the dark meat is rich in phosphates. Pork, also, coming from the laziest of animals, has little to recommend it. Lobsters and crabs contain a large portion of nitrates and phosphates, but they are hard to digest. The prevalent idea that oysters are rich in nourishment, is unfounded; they may be classed with pork.

If the stomach is in a right condition to handle it, being perfectly sweet, milk is an ideal food, containing in proper proportion, all the elements necessary to the support of man, the difficulty being its tendency to sour upon an easily disordered stomach.

An individual in good health and of average weight, requires five ounces of nitrates for the muscles, twenty ounces of carbonates for heat, two and a half per cent of phosphates for the brain and nerves, and some waste to aid the liver and kidneys in throwing off effete matter. In this connection it is well to classify foods, as to their properties, and give a short list to be used for reference. Under the head of phosphatic or brain foods, are lean meat, fish, cheese, whole wheat, oatmeal, almond nuts, Southern corn, beans, peas, potatoes, figs and prunes. Under the head of carbonates or heat and fat producing foods, are fat, sugar, butter, rice, rye, chocolate, dates, buckwheat and Northern corn, and white bread. Under the nitrates, producing muscle, are vermicelli, cheese, meats, Southern corn, salmon, lentils, peas and beans.

The great tendency is to eat a superabundance of carbonaceous foods. A over-heated condition of the blood is the result, which is productive of many dis-

eases. Nitrogenous foods, as a rule, are difficult of digestion, and should be accompanied with a sufficient amount of waste, and foods containing carbonates and phosphates. In short, to preserve a happy balance in the proper selection of proper food, is one of the greatest secrets of health.

Clergymen, lawyers, over-worked physicians, shop girls, school girls, care-worn mothers, in fact all classes of people who suffer from a tired brain, lose great quantities of phosphorus, which needs to be replenished. This is best accomplished by keeping as close to nature as possible.

Phosphorus as found in drugs, is inferior to that contained in the natural products, such as fish, grains, meats, etc. A very simple and nourishing drink, when a person is utterly wearied and despondent from long mental strain, is water mixed with bran, and allowed to stand for about six hours. This abounds in phosphorus, and will quickly brighten the eyes, quicken the brain, and rest and strengthen the nerves. A very weak stomach, by care, may be trained gradually, to digest more difficult food.

"Meat should not be eaten by very young persons. The healthiest and purest lives come from those who do not eat meat before the age of fifteen."

All rich pastry clogs the stomach, and

is poison to the liver. The dull headaches and disposition to do nothing, results from eating too much heat-producing food.

It is a very familiar but sadly neglected fact, that milk should be kept in tightly covered and entirely sweet glass jars or earthen crocks. No known liquid will absorb impurities quicker than milk, yet how totally this idea is disregarded, a visit to some of the milk houses of our farms will prove. There are few articles of food so full of nutrition, or containing so happy a proportion of the necessary elements as an egg. Great care should be used in the feeding of hens. They should be grain fed, and they should have pure water, as the flavor and wholesomeness of the egg depends upon this. They should be cooked as lightly as possible, frying and hard boiling being the most objectionable methods.

Apples are an excellent fruit, and, taken with meals, are very beneficial. Oranges whose skins emit a stinging oil, should be avoided. There are some individuals who can not use the acid of an orange at all. In fact, it is the exception where it agrees with the stomach.

Bananas, in America, are seldom a good thing. In their own country they are said to be very nutritious, and an excellent article of food, but of that we

have little example here. They are usually brought to this country in a green condition, and are ripened under favorable or unfavorable conditions, as the case may be, and are apt to be impure.

Lemons are often useful in many ways. Their best use is without sugar.

Nearly all brands of grapes are safe, except the Catawbas, which are poisonous to some constitutions. Grapes are usually best when the bloom is on them, as it indicates their freshness.

Peaches are a very mild and pleasant fruit, and have no harmful qualities.

Pears have a good action upon the kidneys, and are very cleansing. They decay easily.

Tomatoes should be used cautiously; their acid is very strong, and is dubious in its effect.

Water melons are said "to absorb the low poisons that lurk near the ground." This is a matter of opinion, as they might be raised upon elevations, which would dispute this fact, assuming that it is true.

The almond is said to be the best of nuts, which are rich in phosphates.

The following table will be of inestimable use to those who propose to give this study their intelligent attention. The average time required for the digestion of various articles of food:

	HOURS.	MIN.
Apples (boiled)	2	30
Barley (boiled)	2	
Beans, Lima, (boiled)	2	30
Beef (roasted)	3	
Beef (fried)	4	
Beef, salt, (boiled)	2	45
Bread	3	30
Butter	3	30
Cheese	3	30
Chicken (fricasseed)	2	40
Custard (baked)	2	45
Duck (roasted)	4	
Eggs (raw)	2	
Eggs (soft boiled)	3	
Eggs (hard boiled)	3	30
Eggs (fried)	3	30
Fish, various kinds, (raw, boiled, fried)	2	44
Fowl (roast)	4	
Hashed meat and vegetables (warm)	2	30
Lamb (boiled)	2	30
Milk (raw)	2	15
Milk (boiled)	2	
Mutton (boiled)	3	
Mutton (roast)	3	15
Oysters (roast)	3	15
Oysters (stewed)	3	30
Pig's Feet, soused (boiled)	1	
Potatoes (baked)	2	30
Pork, salt, (stewed)	3	
Pork (roast)	3	15
Rice (boiled)	1	
Sago (boiled)	1	45
Soup (barley)	1	30
Soup, chicken, etc. (average)	3	15
Tripe, soused, (boiled)	1	
Turkey (roast)	2	30
Veal (boiled)	4	
Veal (fried)	4	30

A person who lives right will have a

vigorous appetite upon arising, and will crave a hearty breakfast. His mouth will be free from bad tastes, his breath will be sweet and clean, his head clear, his eyes bright, and he will awaken with a sense of refreshment.

In a line with all we have said in our chapter upon foods, we would close with saying that the meal hours should be the happiest of the day. To *think* of *what* you are eating, *how* you are eating, and of its probable effect upon you, and to engage in none but the lightest and most cheerful of conversation, is the best way to insure a good digestion, "a long life, and a merry one."



NATURAL CURE.

This is an age of truth finding and idol breaking. The cherished beliefs of today are swept away by the investigations of tomorrow.

Since I have been working in the healing art, the results of careful search have caused great progress, and I feel a sense of relief and satisfaction when I reflect that at last, the truth is the corner stone of our medical knowledge.

It is not necessary for us to think of the isms, theories and confusions of the past, to arrive at an understanding of the manner in which nature provides for and corrects the diseased changes of the human organism.

Our bodies are composed of the same materials that are contained in plants, all being necessary, and if one or more of the organic or inorganic constituents becomes deficient, nature promptly demands repair, and if this is not supplied, a diseased condition follows. We recognize this condition by the symptoms, or

nature's cry for the deficient elements.

In cultivating any vegetable, it is necessary that the earth surrounding it shall contain all the elements essential for its growth, or it becomes diseased, and, eventually, dies for want of nourishment. The same laws govern the growth and repair of the body.

Dr. Schuessler, of Germany, after a careful series of experiments, determined that the human body is made up of two main constituents, organic and inorganic. The organic are sugar, fat and albuminous substances. The inorganic are water, and twelve minerals, called cell-salts. Water constitutes over seven-tenths of the body, the cell-salts about one-twentieth, and the inorganic matter the remainder. The inorganic salts are the workers, the *vital portion* of the body, and they use the water, organic substances and inert matter, to build the cells of the body. The inorganic salts are, three of lime, one of iron, three of potash, one of magnesia, three of soda and one of silica.

Dr. Carey says: "Should a deficiency occur in one or more of these twelve workers, some abnormal condition arises. These abnormal conditions are known by the general term, disease, and according as they manifest themselves in different ways and in different parts of the body,

they have been designated by various names. But these names totally fail to express the real trouble. Every disease which afflicts the human race, is due to a lack of one or more of these inorganic workers. Every pain or unpleasant sensation indicates a lack of some inorganic constituent of the blood. Health and strength can be maintained only so long as the system is properly supplied with these cell-salts. Having learned that disease is not a thing animate or inanimate, but a condition due to some lacking element of the blood, it follows naturally that the proper method of cure is to supply to the blood that which is missing. In the treatment of disease, the use of anything not a constituent of the blood, is unnecessary, and to give poisons to a sick person, is simply barbarous and inhuman. True, many have survived it, but equally many have been hurried thus to their graves."

Dr. Virchow, the greatest living authority, defines disease as "a lack of some constituent part of the blood at the part affected."

A host of able men have become enthusiastic over the simple facts that are now known as nature's own methods of cure.

These men declare that it is beyond a doubt, that disease is an altered state of

the cells of the affected part or parts, produced by some irregularity in the supply to the cells, of one or more of the inorganic tissue salts.

Health is a normal condition of the body, produced by the requisite quantity of cell-salts being furnished to the different tissues.

The system is not harmed by an over supply of these salts, as they are readily carried out of the body, largely through the skin, kidneys and bowels.

In order to prevent disease, our food supply should be studied, to see that it contains all that is necessary to prevent the body from becoming deficient in any one or more of the required elements.

Our food is obtained from both the vegetable and animal kingdoms. Because the vegetables derive their nourishment directly from the earth, they become our most valuable foods. When we use animal food we get the inorganic salts after they have served in one animal body, and they are not so well prepared to combine with the cells of the human body. It is not true that we must eat meat to be strong. The herbivorous animals are far superior in strength to the carnivorous. The animals that are noted for intelligent capacity for toil, and have endurance, courage and power are herbivorous.

The carnivorous animals are ugly, ferocious, and do not take kindly to work or the needs of civilization.

The diet of the Greek athletes was figs, nuts, cheese and maize bread without wines.

The physical labor performed by non-meat eating people of all countries and climates is enormous, and demonstrates conclusively that we can live without meat. Some English authorities state that meat eating is a main cause of many diseases, and especially mention cancers as a direct result of its use.

The majority of people use a mixed diet, and have too great a variety.

The horse will live on hay and oats (and if properly cared for) without disease, and endure a large amount of work.

Man should have a better quality and a less number of foods to get the proper amount of ingredients to support the body. In the chapter on foods I have given a fair consideration of what we should eat, but it will not be out of place to add a few more thoughts.

In answer to the question, What is best to eat to get nature's foods? I use a portion of the language of one who is living and enjoying the benefits of it.

We use all the vegetables in varieties of ways, plenty of fruit, especially

apples, baked and raw, and nuts of all kinds. Many people say that they find nuts indigestible, but it is usually because they eat them after a hearty dinner, which has already sufficiently taxed the stomach.

Make nuts a *part* of the meal, and in a majority of cases they will be digested if properly masticated. Of course, if anyone finds that nuts, in moderation, as food, do not agree with them, their use should be stopped. Two things must be remembered: That it is not necessary to eat more than you would under a meat diet, and also that one cannot simply drop meat from the bill of fare and add nothing to take its place. For instance, if beefsteak and potatoes have constituted breakfast, simply leaving out the meat would be unwise, but if a saucer of some good preparation of wheat with cream be substituted, the breakfast will be found all-sufficient, especially if, as is the case with many, there is a first course of fruit.

I have discarded oatmeal entirely, and use for cereals, wheat germs, wheatlet and a delicate preparation of hominy called "Snowdrift," also shredded wheat biscuit, which we think very delicious as well as valuable. If one does not spend from twenty-five to fifty cents for steak or chops, ten cents can be spent for

cream and still have money left. Although shredded biscuits are so generally used now, yet, but few stop to think in how many good ways they can be used. Many persons pour over the biscuit enough hot water or milk to soften them, then use cream freely. Sliced apples or bananas can be used on them before the cream, which will be a great addition.

Granola and granose flakes are used in the same way as the shredded biscuits, although the heating is not necessary.

Croquettes are made of almost everything and fried in cottolene. Some prefer pure olive oil, which, I believe, is the best. Our favorite kind is made of split peas and potatoes, the peas alone being too heavy. The peas are boiled to the consistency of mush, and then nearly an equal quantity of mashed potato added and seasoned to the taste. To be made especially delicious, there should be added half a cupful of pounded peanuts.

Croquettes made of rice and seasoned with nut-butter, using perhaps a tablespoonful of the butter to a dozen croquettes, are better than those of plain rice.

This nut-butter is a useful addition to soups, and gives a rich, nutty flavor wherever used. Chestnut croquettes are

made by blanching the nuts and boiling for a quarter of an hour, then using potatoes, as in the case of split peas, and for the same reason. Raw peanuts may be used instead of chestnuts, but they must be boiled longer and pounded, as they will not soften like the chestnuts.

Croquettes may also be made of beans, parsnips, hominy, in fact, anything in the way of vegetables properly seasoned and well cooked can be served.

Of soups there is also a variety; the purees of split peas, beans, etc., all the cream soups, celery, corn (I used the grated corn), green peas, etc.; a delicious vegetable soup is made of a turnip, two potatoes, a carrot, a few sticks of celery, a little tomato and corn or beans that happen to be left over. The raw vegetables are cut into dice and cooked until soft, then the others added. The number and kinds of vegetables can be changed according to circumstances or taste. All these soups are of course without stock. Potato soup without milk can be made richer by pouring it boiling hot over an egg broken into the tureen and stirring rapidly while pouring.

Most of the vegetables can be used for salads, especially with celery salad, if one part English walnuts to two of celery is used with a mayonnaise dressing, the result will be surprisingly good.

Delicious sandwiches are made of pounded nuts mixed with a little hard-boiled yolk of an egg and salad dressing spread on thin slices of buttered bread. People are more and more realizing that white bread is not nourishing, because the most valuable part of the wheat is removed. The entire wheat flour is supposed to contain all the nourishing part of the wheat without the hull. White bread is never seen on our table except occasionally for guests, and they usually prefer the better kind.

One thing more I wish to mention as a valuable article of food, and that is what is commercially known as "nuttose." It comes in small cans and is very delicious and concentrated. It is good sliced, plain or warmed with a brown gravy. A piece the size of two fingers is almost a meal in itself.

All the "weeds," like celery, lettuce, spinach, etc., are useful and palatable additions to any table, and in these days can be obtained at all seasons of the year. Some readers may ask how we make plum pudding and mince pies without meat? I reply that these are mixtures not fit for any ordinary stomach. The appetite for highly seasoned food and rich mixtures is not a natural one, and a simple diet is much better. Pies for dessert will soon be a

thing of the past, and their place will be filled by fruits and delicate desserts like blanc-mange. Usually the dessert is just so much more than the stomach can well digest, especially if there have been several courses. When one sees the ordinary bill of fare of the average home he wonders, not that the children begin young to have dyspepsia, but that they live at all. If we could only rid our minds of the old prejudices we could more easily assimilate new ideas.

The golden rules for eating must not be forgotten in whatever is taken for food if good health is desired. They are as follows: Chew your food thoroughly; eat slowly; eat as little as possible and be comfortable; do not drink much near the meals; eat a good breakfast; a fair dinner, and a light supper.

To get a fair understanding of the general application of the above mentioned tissue salts, I give their name and some hints in regard to their sphere of action in disease.

CALCAREA FLUORICUM.

This salt is indicated in all diseases affecting the substance forming the surface of bone, the enamel of the teeth, and part of elastic fibres, no matter in what structure they may be found. For

instance, all ailments that can be traced to a relaxed condition of the elastic fibres, including dilatation of the blood-vessels, blood tumors, piles, enlarged and varicose veins, indurated glands, relaxed uvula, etc. The symptoms are all worse in damp weather, and are relieved by fomentations and by rubbing.

CALCAREA PHOSPHATE.

The sphere of the phosphate of lime includes all bone diseases, whether due to some inherited dyscrasia or to defective nutrition in osseous and other structures dependent upon a proper distribution of lime molecules in the body. Is of importance in anæmia and chlorosis; in convulsions and spasms in weak, scrofulous subjects; during dentition, when the teeth are slow in making their appearance, or decay too rapidly. In convalescence after acute diseases, and in chronic wasting diseases, it acts as a tonic, building up new red blood corpuscles, and restoring the lost vitality. Deficient development of children and young people; emaciation without apparent cause; onanism; suppuration of bones; spinal weakness and curvature, and aids the union of fractured bones. Cold, motion, change of weather, getting wet, generally aggravates symp-

toms. Relieved by rest, warmth, and by lying down.

CALCAREA SULPHATE.

This is a most excellent remedy in suppurations, to which it is closely related. It is indicated in swelling in the soft parts, in connective tissue, with threatened suppuration, or where suppuration has already taken place. Abscesses, either aborting or hastening suppuration; boils, carbuncles, felons; pimples and pustules on the face; in fact, in all ailments where pus-formations are liable to, or have developed.

Symptoms are aggravated by getting wet or by washing and working in water.

FERRUM PHOSPHORICUM

Is given in the initial stage of all congestions, inflammations and fevers. Iron possesses an affinity or attraction for oxygen, and hence is an important agent in all diseases in which the blood and its corpuscles are involved. Consequently, the first remedy in all cases depending upon a relaxed condition of the muscular tissue, and in abnormal conditions of the corpuscles of the blood themselves. In all febrile disturbances and inflammations, at the beginning, especially before exudation has commenced, the

accompaniments of these conditions manifested by flushed face, quick, full pulse, hot, dry skin, thirst, pain and redness of the parts. An excellent remedy also in anæmia, and to make blood. The symptoms calling for this deficient cell-salt are always aggravated by motion and ameliorated by cold.

KALI MURIATICUM

Is given for the sequelæ of all inflammations, for exudation and infiltration, especially of fibrous character, and in the inflammation of serous membranes, when the exudation is plastic in nature. A most excellent remedy in the later stages of all catarrhal states. The most characteristic symptoms of the chloride of potash are glandular swellings, discharges or expectorations of a thick, white, fibrinous consistency, white or gray exudations, and a white or gray coating at the base of the tongue. The efficacy of this remedy is demonstrated in chronic catarrhal conditions, croup, diphtheria, dysentery, pneumonia. In alternation with *Ferr. phos.* in coughs, deafness from catarrh of the eustachian tubes, skin eruptions with small vesicles containing yellowish secretions, ulcerations with swellings and white exudations; in leucorrhœa, with characteristic discharge, etc. Symptoms in general

are worse from motion; gastric and abdominal being worse after taking pastry, rich and fatty foods.

KALI PHOSPHORICUM.

Nervous conditions known as neurasthenic, is the field in which this salt has become pre-eminent. The results of a want of nerve power, as prostration, exertion, loss of mental vigor, depression, brain-fag, softening of the brain, and when there is rapid decomposition of the blood. It is curative in septic hemorrhages, scorbutic gangrene, stomatitis, offensive, carrion-like diarrhœa or dysentery, adynamic or typhoid conditions, incontinence of urine, urticaria, predisposition to epistaxis in children, dizziness and vertigo from nervous exhaustion; tongue coated as if spread with dark liquid mustard. Many symptoms are aggravated by noise; by rising from a sitting position; by exertion, physical and mental; pains worse in cold air; ameliorated by gentle motion, eating, excitement, anything, in fact, that will relieve the mind and aid in restoring the lacking nerve force. It is *the* remedy for insanity.

KALI SULPHURICUM.

The chief indication for this remedy is a yellow, slimy deposit on the tongue;

all discharges and secretions are of a thin, sticky, watery or slimy-yellowish nature. It has been given in bronchitis with yellow, slimy or thin, watery expectoration; skin diseases with a sticky, yellowish secretion and peeling off of the epidermis; scarlet fever, especially in stage of desquamation; dandruff, yellow scales; dyspepsia; catarrh of the stomach with a yellowish, slimy coating of tongue; catarrh of bowels; diarrhœa; leucorrhœa; ophthalmia, if secretions are as above described; sudden suppression or retrocession of eruptions; menstruation too late and too scanty, with weight and fullness in abdomen, etc., etc.

All ailments are worse in a warm room and toward evening, and better in the cool, open air.

MAGNESIA PHOSPHORICUM

Is to be thought of in all diseases having their origin in the nerve cells, or in the terminal bulbs of the nerves, in the muscular tissues, or in the muscles themselves. It is particularly indicated in lean, thin, emaciated persons of a highly nervous temperament. The value of this remedy is shown in all forms of spasms, in cramps, tetanus, St. Vitus' dance, epilepsy, spasmodic retention of urine, colic, paralysis agitans, etc. It is the remedy for neuralgic pains in the

head, face, teeth, stomach and abdomen. The *Magnes. phos.* patient is languid, tired and easily exhausted. All pains are lightning-like, shooting or boring, and change their location frequently, and are worse on the right side, from cold air, washing in cold water, and from touch; relieved by warmth, pressure, friction, and by bending double.

NATRUM MURIATICUM.

Wherever is found a hypersecretion of the watery elements of the body, with simultaneous want of activity in some other portion of the mucous membranes, you will find *Natr. mur.* the remedy. It acts upon the lymphatic system, the blood, liver, spleen, and upon the mucous lining of the alimentary canal. *Natr. mur.* is indicated in headache, toothache, faceache, stomachache, etc., where there is either salivation or hypersecretion of tears, or vomiting of water and mucous; also catarrhal affections of mucous membranes, with secretion of transparent, watery, frothy mucous; also small watery blisters, breaking and leaving a thin crust; diarrhœa, transparent, glossy, slimy stools; conjunctivitis with discharge of tears and clear mucous; tongue clear, slimy, small bubbles of frothy saliva on sides; leu-

corrhoëa, watery, smarting or clear, starch-like discharge, etc., etc.

NATRUM PHOSPHORICUM.

This is the remedy in all cases where there is an excess of acid. Acts also upon the bowels, glands, lungs and abdominal organs. It cures sour belchings and rising of fluids; sour vomiting; greenish, sour-smelling diarrhœa; colic; spasms; fever from acidity of the stomach in children; ague with characteristic coating of tongue; eyes discharging a yellow, creamy matter; gastric derangements with acidity and flatulence; indigestion; intestinal worms, etc. A characteristic indication is a moist, thick, golden-yellow coating on the tongue and palate.

NATRUM SULPHURICUM.

An active carthartic is pre-eminently a liver remedy. In addition, however, it exhibits a marked similarity to the uric acid diathesis, and is certainly a valuable remedy in combating numerous phases of that malady. It is indicated when there is a dirty, brownish-green or grayish-green coating on the root of the tongue, and dark-greenish stools from excess of bile; in biliousness, excess of bile, bitter taste, greenish diarrhœa, vomiting of bile; jaundice; dropsy from

disease of the liver; also after scarlatina, bilious headache; intermittent fever with vomiting of bile and above symptoms; diabetes, when the liver is at fault; erysipelas, smooth, red, shiny, coming in blotches, with swelling of skin; gravel; œdema of prepuce and scrotum; vomiting in pregnancy with bitter taste. Always worse in damp, wet weather, and from lying on left side; relief in warm, dry weather, and in the open air. Pains necessitate frequent change of position.

SILICEA.

A remedy for deep-seated suppurations affecting the tendons, periosteum and bones. Promotes suppuration, therefore indicated when there is hardness and induration with suppuration; infiltration terminating in suppuration, and in imperfectly nourished constitutions due to deficient assimilation. Valuable also in diseases resulting from suppressed foot-sweats; in menstruation associated with icy coldness over whole body, constipation and foetid foot-sweats; in carbuncles; swellings which become hard and threaten to suppurate; styes on eyelids; chronic syphilitic indurations; suppurating glands; epilepsy nocturnal, with change of moon; gouty deposits in large joints of fingers, etc. Symptoms

are always worse at night, during full moon, in the open air, and from suppressed foot-sweats; the application of heat and warmth is a relief to these conditions.



DISEASES IN GENERAL.

Disease is a condition of the body marked by an unhealthy action of one or more of its various organs. There are about twelve hundred different diseases that may affect mankind, and when we consider that these diseases may be complicated with nearly eight hundred more diseased conditions, we can readily see that it is no easy matter to fully understand all the unhealthy workings of our body.

Sickness is such a common condition that few escape its severe changes. Disease is the result of disobedience. The laws of perfect living have been broken, and suffering comes as a natural result. Whether it is a medical or surgical affection, it is the result of a cause, and this cause can always be traced to one or more broken laws of life.

Every one wishes to be healthy, and never to suffer with the tortures of disease. I am happy to state that this is possible. If the causes of disease, in its

various forms, were better understood, there would be less breaking of the laws of living. Two classes of influences are at work to prevent us from living perfectly. External and internal. The human body is exposed to infection or poison of various kinds, at every point.

Some twenty-five years ago, we did not feel so alarmed concerning what we ate, drank and breathed. Modern research has proven, however, that we are in danger of severe results from what was once supposed to be innocent causes. Death frequently carries off a person in a few hours or days, who was in the prime of life and apparent good health. Epidemics have appeared in very unexpected neighborhoods, which could be traced to impure water and food. Sometimes, even, several members of the same family die. This arouses public opinion, and awakens professional interest in a very important and intricate subject.

In the daily round of human life, the processes of building up and breaking down never cease, and the complex molecules which make up the body, pass through several important changes.

Experience clearly teaches that man is constantly in danger of being overpowered by poisons, generated within his system. Self-poisoning is prevented only by the natural working of the five excre-

tory organs, namely, the skin, kidneys, bowels, liver and mucous membranes. The kidneys and liver are two great sentinels which are always at work, to prevent the system from being injured or destroyed by poisonous compounds. Careful chemical investigations have shown that many severe diseases depend upon the products of fermentation and putrefaction. The products continue to act long after the fermentation and putrefaction are checked.

Disease is not independent of the body. On the contrary, it is a thing that is part of it, and destroys its ability to properly care for itself. It is beyond question that what we take to support the body—air, fluids and solids, are a great source of disease. It is very important to prevent the system from becoming poisoned by the absorption from the digestive organs, of badly digested food, and any material that has undergone putrefaction.

Dr. Bouchard says that self-poisoning is the cause of most of the diseases of the human race. This poisoning takes place largely in the digestive organs, and considering the important part they play in supporting the system, it is proper to carefully study the best methods of caring for them.

The tongue gives us the best informa-

tion in regard to their workings, from infancy to old age. If anything goes wrong to any extent, the tongue is sure to give the warning, in a correct way. It is a part of the tongue's work that always tells the truth, and we should not fail to heed its warnings. The tongue being a part of the digestive tract, supplied by the same nerves and invested with the same mucous membrane, can speak with authority. The form of the tongue changes in many diseases, and is quite expressive. A pointed tongue shows irritation and too much blood in the stomach and bowels. The dry tongue shows that the digestive organs can do but little work, and fluids should be used mostly, until the secretions from the intestinal canal and associate glands are established again. The cracked tongue points to inflammatory affections of the kidneys. A pure white coat on the tongue generally indicates acidity of the stomach. A yellow coated tongue points to liver affections. A bright red tongue indicates irritation of the stomach. A deep red tongue, which is usually contracted and dry, is seen in protracted and low forms of disease, which generally take on a typhoid type.

The tongue gives the best evidence of the condition of the blood, and is carefully observed by the critical student of

disease. The coat on the tongue is caused by the condition of the digestive organs and the blood. About two-thirds of it comes from the bad condition of the digestive tract, and one-third from the glands of the mouth.

In order to have a clean tongue and enjoy all the benefits arising from it, the working condition of the stomach and bowels must be perfect, and their ability to handle food should not be overestimated. During infantile life the mouth of the child should be kept carefully cleansed, especially before each feeding. One of the best washes, is a weak solution of borax, in warm, soft water.

The milk that remains in the mouth often ferments, causes irritation and a sore mouth may develop, as well as irritation of the stomach and bowels, giving rise to colic and diarrhœa.

As soon as the child's teeth appear, they should be brushed every day, with a soft tooth brush.

Overfeeding has killed more babies than starvation, and is responsible for most of the ailments of infancy, such as gastric catarrh and diarrhœa. This is especially true in summer, when the fretfulness of the child, which is often mistaken for hunger, may be due to thirst, the external temperature, to warm clothing or indigestion.

The best thing to do at such times, is to reduce the bulk of each meal by one quarter, and give the infant more water, as infants, like adults, require less food in hot weather.

If the child is having frequent greenish discharges from the bowels, some mild laxative should be given to clean the digestive organs of all fermented material. Our first thought is to stop the diarrhœa, but this should not be done, as it is nature's way of removing all deleterious substances until all irritating material is removed. Soon the stomach and bowels will regain their strength if properly managed, and digestion will go on in the natural way.

Infants and animals never have gastric catarrh if let alone, for nature wisely provides for them. They are prompted to take food when they need it, and are not apt to get too much.

Dyspepsia is an affliction of civilized life, and has become our *national* disease. I believe it is safe to state that more people are made unhappy and miserable by it than from any other affliction.

The human body is a self-preserving machine, and is presided over by a form of intelligence called instinct, which is independent of the higher power of reason. Instinct gives warning that repairs are needed, when the body is worn

out and wasted away from any cause.

A recent writer says: "This information is sent forward to the stomach from all parts of the body, through the nervous system, as if by a network of telegraphic wires. In the stomach they all center, with a result to fill certain vessels with a fluid substance. As the need for repair increases, these vessels distend more and more, and their distension causes the feeling of hunger, which becomes more and more pressing, unpleasant and painful, as if to compel the individual to attend to the urgent needs of the system. The very instance the first particle of food reaches the stomach, the sluices of the engorged vessels open, enveloping each particle closely, beginning to dissolve it at once. The unloading of these overfilled vessels gives ease first, then comfort, thence positive pleasure; hence we warm to the humanities of life as the meal progresses."

It should be remembered that the amount of gastric juice and digestive fluids are prepared and adapted by instinct, to the wants of the system.

Nature will rectify an error now and then, but if we insist on taking more than the system needs, disease must follow. Eating too much and too fast, without taking the required amount of exercise, causes the majority of the dis-

eases of the digestive organs. No wonder that dyspeptics are full of complaints. Their blood is made from badly digested food, and their body is made from bad blood. The result is that every atom of their bodies is impure and unhealthy. Most bad blood is made from imperfect digestion, and the remainder from the fact of the system not carrying out of the body all of its own waste matter. In order to always have good blood, good food should be taken, and it should be perfectly digested.

Indigestion is the father, and bad blood the mother of most diseases, hence to avoid the far-reaching and destroying effects of indigestion and bad blood, we should study carefully what we can digest perfectly.

It should be remembered that want of exercise is a great cause of dyspepsia. All persons suffering with this disease will have all or part of the following symptoms: Weight in the stomach and often oppression in the chest; bad taste in the mouth, especially in the morning; no appetite, or it will be fitful or excessive; acidity with belching of gas and a burning sensation in the stomach; nausea and a sinking feeling that often comes on suddenly; the bowels are costive, which is the greatest cause of the dull headache that most cases have;

stomach and upper part of the bowels are very tender; there is more or less gnawing, dull or griping pain in the bowels; palpitation of the heart is often a very annoying symptom; disturbed sleep, dreams and nightmare is noticed in most cases; the haggard face and general distress is a prominent symptom.

The mental symptoms are many, but the most common are nervousness; want of strength or energy; a discouraged and fretful feeling; more or less irritable and despondent; in bad cases there is often suicidal thoughts and self-distrust. Most cases are moody and suspicious, and there is more or less loss of flesh.

The most prominent of the mental symptoms is *depression of spirits*, which often govern the whole life of the individual. All dyspeptic cases get cold easily, and if there is a weak portion of the body it will become diseased in most cases. The cold drives the bad blood from the surface of the body into the internal organs, and if every organ is not able to stand the *overcharge*, it will become irritated, inflamed or congested. Indigestion with a hard cold may cause irritation, inflammation or congestion of any internal organ of the body, and it is the reason why so many

people suffer with pneumonia, bronchitis and bowel affections like diarrhœa, acute inflammation and winter cholera, also rheumatism, neuralgia, sore throat, earache, toothache and catarrh.

A body made from well digested food is not in danger of every ill. It has the power to care for itself, and successfully resist all dangerous causes of disease. From what has been said it can readily be seen that good digestion is the foundation stone of the human body. Especially is this true with children as they are not matured, and their constitutions have less vitality to overcome the errors of improper living.

The best remedy for bad blood is good digestion. Indigestion is a curable disease, and should be treated before all its injurious results develop. Nearly all of the other diseases that affect the digestive organs, are caused by the various forms of dyspepsia.

The liver is a very important organ in digestion and in purifying the body. When the liver does not act or is diseased in any way, it is folly to take solid food. Water, only, or non-fermenting liquids should be used. Nature steps in and takes away the appetite, to prevent us from further oppressing the liver and system with an additional load. To eat without an appetite, is to make a bad

condition worse, and soon nausea, and sometimes vomiting, comes on, preventing any further abuse. The liver will take care of itself the best of any organ in the body, if it is not prevented from doing its regular work.

If from any cause the bile remains in the blood, a heavy or sluggish feeling will be noticed. Many persons suffer with stupidity, sleepiness, and a dull headache. The stagnation of bad blood about the brain causes the headache, and, if allowed to continue in feeble people, may cause congestion of the brain. If the bad blood is driven to the internal organs from a cold or overdoing, congestive fever will follow, and if any vital organ is totally destroyed by congestion, death takes place immediately. I have seen cases where more than one vital organ would become affected, and they would linger until relief or death made a change.

The harmful effects of bad blood cannot be described. If any organ becomes irritated or injured, it will be made worse by its deleterious effects. Any injured part will not heal, but generally matter-ates, and is kept in a state of chronic inflammation for a long time.

It is a generally accepted fact that we inherit bad blood, weak constitution, and many diseases, and, to a certain ex-

tent, this is true. Parents may be so weak from disease or overwork, that they do not transmit the vitality to their offspring that they should. We do not inherit a disease, but an inclination or weakness that allows moderate causes to bring it on. If the bodies of the parents are impure, their children must be also, and it would be very difficult for the children to so live as to fully free themselves of their imperfect constitutions, but they can be greatly improved by carefully observing all the laws of life.

It is beyond a doubt that the majority of bad blood is made from imperfect living. A perfect body can be made impure and entirely destroyed by not observing the laws that keep it in a normal state. In other words, our bodies are what we make them. If we have an unhealthy one, we can improve it, and, in many cases, make it perfect by what Dr. Chambers terms, "renewal of life."

Medical history informs us that we still have the same number of diseases that they did in ancient times, but in a modified form. The causes have always been the same for each disease, but its treatment has changed every few years. It will be impossible to mention every cause of diseased conditions that exist, but the majority should be fairly well

known. Causes that are parts of the natural order of the universe, and are beyond human control are: temperature, atmospheric pressure, electrical conditions and storms.

Causes springing out of nature in some unknown way and very difficult to control are: all causes that communicate from one person to another, specific diseases which are produced by organic poisons, such as measles, scarlet fever, etc. All diseases that are communicated by descent are included in this class, as consumption and cancer.

The causes of disease that depend on age and modes of life, as overwork, injurious foods and drinks, bad habits, improper exercise, over-study, occupations, ungoverned passions, privations, moral contagions, senile decay, have been fairly well considered in other chapters of this work. They are all subject to certain continually recurring external variations; which imperceptibly produce the most marked physiological action, even on the healthy body. This can readily be seen when we look over the diseases of the various seasons of the year. It is not fully known why catarrh, croup, bronchitis, pneumonia, influenza, pleurisy, quinsy, erysipelas, acute rheumatism, gout, chronic asthma, carbuncle, diphtheria, diarrhœa, and dys-

entary prevail at certain seasons with greater severity.

During the winter and spring, influenza, catarrh, bronchitis, croup, acute rheumatism and a few other diseases are apt to be very severe and cause many deaths, especially among the young and old people. Probably the extreme humidity of the air with a temperature from 40 to 60 degrees Fahr., and the unfavorable conditions to equalization of the animal heat by evaporation and radiation, with the fact that the body is actually wasting and losing faster during these months, are some of the reasons why so many febrile and inflammatory diseases are seen during the first six months of the year,

A sudden fall of temperature strikes with telling effect upon a great many people of all countries. The mortality increases, largely with young and old, as the temperature declines. At or near thirty, the effect of cold does not change the mortality much, but on those above this age the mortality doubles for every ten years of life. If one person is killed at thirty, two will be at forty, four at fifty, and so on in this ratio.

In nearly the language of an English author, we find an explanation of the effects of cold in the simple estimate we have already formed, as to the force of

vitality at different ages. We have assumed that the body reaches its maximum of development at not far from the age of thirty. At this period, if it be healthy, it generates by its own chemical processes as much force as shall enable it, within given bounds, to work its own machinery, to call forth at will a limited measure of extra force, and to supply a fluctuating loss that may be conveyed away by contact with the surrounding air, and by other bodies that it may touch, and that are colder than itself. The body yields, therefore, applied force, reserved force, and waste force.

These, under ordinary circumstances, are sufficient to maintain the perfect organism in effective life. So much active force gives the body the power to perform so much labor; so much reserve force supplies it with the power to perform a measure of extra labor to meet emergencies; so much waste force enables it to resist the external vicissitudes without calling on the supply which is ever wanted to keep the heart pulsating, the chest heaving, the glands secreting, the digestive apparatus digesting, and the brain receiving or thinking. Let this distribution of force be disturbed, and the life power is reduced.

If we use active force too long, we be

come exhausted, and call upon the reserve; and if we still continue the process we fail at last, unless sleep forces itself upon us and brings renewal of power. If we are robbed of the waste force quicker than we can supply it, exhaustion is produced; inefficient nervous control over the circulation develops, and a congested condition of the lungs and all internal organs supervene, which causes death so easily when exhaustion is severe.

That the exhaustion should be more rapid in the man who has reached his prime, is but natural. In his past he has been growing, developing his body, and in the course of development, he has used up an excess of force commensurate with the demands of his growth.

When he stops in development, and stands on a fair level with the external forces that are opposed to him, then his own force, for a short time balanced, soon becomes second in command. He feels the cold more severely if his rest is broken, and his demand for artificial heat becomes urgent. If he loses or cannot take food from any cause, he fails rapidly.

As a matter of course, if cold affects a healthy man in this way, it would be still more severe in the unhealthy. If the man has a weak point in the vessels

of the brain, exposure to cold renders that point more liable to pressure and rupture, with apoplexy or paralysis as the consequence. His ills will be doubled if he has bronchial disease. If he has a feeble heart, it will sink under the strain put upon it. If he has enfeebled circulation through the kidneys, complete obstruction may be the result. If he is improperly clothed and fed, he will be subject to intestinal congestion and diarrhoea.

From the above it can readily be seen why the mortality of all diseases runs up so fast whenever there is a sudden fall of the temperature.

In this age of electricity, the effects of electrified air or ozone upon the human body, should be generally known. Many attempts have been made to determine the influences of electrified air on animals as well as man. During the seasons when catarrhal affections prevail, there is an increased electrical tension.

It has been found by experiment, that inhaling ozone, a distinct nasal catarrh can be developed, accompanied with pain in the forehead, hoarseness and sore throat. It has been proven beyond a question, that meat-eating animals are more susceptible to its effects than those that live on herbs, grain and fruits.

A constant exposure to ozonized air

produces congestion of the lungs, bronchial irritation, the formation of a tenacious mucus in the breathing tubes, and a destruction of the most vital part of the blood, which allows most of the inflammatory affections to develop.

The reason why all people are not affected alike, is because some persons are not so susceptible to the influence of ozone as others. It is probably true, also, that the ozone produced in the atmosphere in electrical storms, may not diffuse equally, but in lines or local currents, so that but a limited number of persons would become affected. During short and local electrical storms, the inhabitants over which they would pass would be more or less affected.

It is probable that during many ozone periods, the ozone is greatly influenced by the temperature. It has been determined that ozone will not produce catarrhal symptoms when the temperature is up to 75 degrees, or above.

Heat so changes the special influences of electrified air upon animal organisms that some will suffer, and others escape from its influence, even though it be widely diffused.

Judging from what is already known of the effects of ozone, I am led to believe that not far in the future we shall fully understand the nature of the external

and uncontrollable causes of the inflammatory maladies included under the names of catarrh, bronchitis in its various forms, irritation and congestion of the lungs, pneumonia, influenza, croup, laryngitis and la grippe.

From all the evidence I have before me, I am convinced that soon we will be able to predict the outbreak of these diseases from the meteorological changes, and forewarn the community of their dangers.

The following quotation will explain what the atmosphere is without electrical influences: "In some researches I conducted on the inhalation of oxygen gas, I observed that if an animal were made simply to breathe an atmosphere of pure oxygen gas, although the oxygen was perfectly cleared of the products of the combustion of the animal, it would not sustain life, but would allow the animal to fall into a somnolent condition and to die. But if electrical discharges were passed at intervals through the oxygen, or if it were kept at a temperature above 75 degrees Fahr., it would continue to sustain life. In another series of experiments, I learned that if oxygen were freshly made and passed in the fresh state through a chamber in which living animals were placed, the animals would continue to live. But if the oxy-

gen that had swept through the chamber, although it were thoroughly purified of animal products, and although it still appeared to be absolutely pure oxygen, were used again, it failed to sustain life until it was subjected to the action of the electric spark, when it regained its activity."

I infer from this quotation that oxygen may exist in the atmosphere in an inactive condition, not inducing a healthy state, but depression of mind, languor, torpidity, and a feeble body.

It can be seen from the above why some sections of the country are more healthy than others. Electrified air gives energy, and power to do a large amount of work.

It is a well known fact that the atmosphere presses on the earth's surface at the rate of fifteen pounds to the square inch on an average. This pressure exerts an influence on the animal functions, and if it is reduced to any extent, it will often be attended with aches and pains in one or more joints or limbs. Reduced pressure effects many people very unfavorably. Every form of chest diseases are more severe when the barometer is low. Coughs are more frequent; all kinds of pains are intensified, and persons suffering with rheumatism or neuralgia, will become worse. In all

cases suffering with irregular circulation through the brain, giddiness and vertigo is easily developed. Fevers and inflammatory affections become more severe when the barometer is low.

Reduction of atmospheric pressure is a great cause of suffering to all persons afflicted with consumption. Winds and air saturated with moisture, is conducive to the development of rheumatic disease and organic heart affections, that may result from rheumatism.

Malarial fevers and consumption are induced by long exposure to moist air, especially during sleep in damp and low buildings. Just what part winds play in causing disease is not known, but it is true that their effects are unfavorable. South-west wind is known to increase acute inflammatory conditions, while north or north-east winds aggravate all kinds of pains. A cutting and depressing east wind is very severe to those who have a very low stock of vital energy. Cold winds should be avoided by old and feeble persons.

Air is charged with all kinds of impurities, which come from animal and vegetable decay, and it is not a very pleasant thought that we are constantly breathing through our nose and mouth, all sorts of microbes and diseased germs. We should not breathe through the

mouth, but if we do, it has the power to care for itself much better than the nose. The mouth can be easily washed out, and the teeth can be readily cared for, but the nose is so formed that few people think of cleaning it, unless some disease or accident especially calls our attention to it. It is exposed to all kinds of odors, being a nidus for all kinds of fine dust from organic and inorganic matter, which decomposes and becomes mixed with its own secretions. This infected matter irritates and inflames the mucus membrane, which is the main cause of most of the acute and chronic disturbances that are so frequently seen in the nose.

The mucus membrane in the nose is laid on bones mostly, instead of muscular tissue as in nearly every other part of the body. If a mucus membrane becomes inflamed or ulcerated, over a muscle, its action will so injure the nerves in the tender mucus surface that pain will call our attention to it. But this is not true in the nose. All forms of ulceration can go on for a long time without causing any pain or special discomfort.

The nose has no cleansing power except forcible expiration of air through it to blow out accumulated matter, which is probably the greatest cause of it being

affected with inflammatory disorders more frequently than any other part of the body. It has two functions, respiration and olfaction, which are carried on in almost a passive manner.

Being passive in action, our nose is unable to keep itself free from irritating matter that is constantly collecting in it, which in time produces diseased changes that generally extend into the throat, ears, larynx, lungs and general system. One author says, "that a filthy nose is the home of colds," and I find it difficult to deny that this is not true, to a certain extent, at least. I can easily see how infected matter could be absorbed from it into the system to such an extent as to cause a general poisoning of the body, and chilly sensations come on as a result which would cause the usual tingling and fullness in the nose, or an increase of the already existing irritation or inflammation.

These facts should remind us to "keep our nose clean."

Every year thousands of people are laying the foundation for deafness, diseases of the throat, lungs and general system, by allowing colds to "wear out," which injures the feeble parts of our body the most. If the lungs happen to be weak or irritated from any cause, a more severe condition will be apt to

develop, and if repeated attacks of colds are allowed, death from consumption may be the probable result, especially if the digestive organs do not do their work well. Whatever organ is debilitated, it is liable to be excited into a worse or uncontrollable condition.

A knowledge of the favorable or unfavorable changes of disease which are determined by the symptoms, is of great value to all. The most prominent and important are:

Bleeding from the lungs, stomach, kidneys, bladder and bowels, which is always more or less dangerous, and demands prompt attention.

Great anxiety is an alarming symptom, especially in fevers, diseases of the brain, injuries and striking in of eruptions.

Very difficult breathing is an unfavorable indication in fevers, consumption, inflammation of the lungs and injuries. It is also dangerous in croup, where there is rough, loud, crowing or hissing cough.

A constant disposition to sleep, or coma, in acute diseases is a severe symptom, and energetic measures should be used to give relief.

Convulsions are often seen, and are more dangerous among children than adults; they are especially to be feared when occurring during, before or after

diseases of the brain, fevers, inflammations, whooping cough, or when there is striking in of any eruptive disease.

Confusion of ideas and thoughts, and a loss of memory are unfavorable changes in all acute affections and diseases of the head.

A sudden cessation of any cough, attended with prostration and nervousness, should receive immediate attention.

Delirium is dangerous only when severe, as in the low muttering kind which is often seen in bad injuries of the head, cessation of the urinary discharges, and diseases of the chest, especially consumption.

Diarrhœa demands immediate attention, and should be feared if it occurs during inflammations, low fevers and the later stages of chronic diseases.

Deafness may require attention when occurring during the course of diseases of the chest, and fevers, but is not an alarming symptom. If difficulty of swallowing comes on during the course of diseases of the stomach, head, fevers and some affections of the throat, it is very dangerous.

Emaciation, or loss of flesh, when continued for any length of time, is always unfavorable.

Long continued ulcerations of any part of the body, especially if they are

purplish and dark, are unfavorable.

Fainting is a serious symptom with most persons suffering with diseases of the heart or profuse bleeding from any part.

If hiccough continues in spite of all treatment during the course of acute or chronic diseases, it is an unfavorable symptom.

The abnormal conditions of the eye, as squinting, too great a contraction or dilation of the pupil, or a fixed condition of it, are to be regarded unfavorably during the course of any disease.

If the eyeball turns up under the upper lid, or the eyes become set so the patient does not notice any object that comes suddenly before them, then we have a very serious condition.

Hoarseness, manifesting itself early, and not yielding readily to treatment, in measles, diphtheria, scarlet fever, small pox or any eruptive disease, should be considered dangerous.

Violent paroxysms of cough that are often seen in whooping cough, should be feared, especially if they last a long time the face becomes purple, the forehead covered with sweat, and the eyes are red and protruding. These cases should receive attention at once, lest they die of congestion of the brain, convulsions or apoplexy. A dark or purplish pale coun-

tenance is a danger signal in all inflammations of the air passages.

If the pain suddenly disappears, whatever organ is affected, it should be regarded as a dangerous symptom. The seriousness of the disease is frequently pointed out by the patient's position in bed. A constant lying on the back, and tendency to sink toward the foot of the bed, is very unfavorable.

Vomiting, in the advanced stages of acute or chronic diseases, when continued and violent, is a serious condition, especially if the matter thrown up is dark, putrid or offensive.

Perhaps the following are the most dangerous symptoms that a patient can have, whatever the disease may be: Picking the bed clothes, grasping in the air, gritting the teeth, throwing off the cover, sleeping with the lids partly open, muttering during sleep, awakening with a vacant stare or look, rattling in the throat, and continued stupor.

The symptoms of approaching death may be followed by *supposed* death. A patient may be in a stupor for a long time, and have nearly all the indications of actual death, and still recover.

NATURAL DEATH.

In our first chapter, we considered the beginning and the general working of life, while in this, we will think of its close, or death. Authors tell us of certain modes of dying, and it is well we should fairly understand what takes place.

Life depends mainly upon the proper performance of the functions of circulation and respiration, and death is due finally to the cessation of one or the other of these. The causes which suspend or check the circulation and respiration, operate directly or indirectly upon them through the nerve centers, which regulate their action.

Death begins at one of three organs of the body; either the heart, the head or the lungs. If it begins at the head, we have death from central paralysis, which destroys the nerve centers governing circulation and respiration. The main symptom indicating death from this cause, is unconsciousness; the respira-

tion becomes slow and labored, and at last, either tranquilly or after convulsions, stops.

If death takes place from failure of the heart, from any cause, it may be gradual or sudden. There are many causes which destroy the heart's action. It may be rendered incapable of propelling its contents by gunshot injuries, a blow on the head, violent emotions, (as fright or grief,) a blow on the stomach, the rupture of an internal abscess, very cold drinks, or an overheated condition of the system. A momentary cessation of the heart's action is termed syncope or fainting, which takes away the blood from the nerve centers which propel the heart. In fatal syncope, the individual suddenly turns pale and dizzy, a cold perspiration starts, the pupils dilate, the vision grows dim, the pulse becomes slow and flickering, and in a few moments life is extinct. The gradual failure of the heart is usually the result of chronic diseases, which cause it to lose its contractile power. In acute diseases the heart may lose its ability to work, from high temperature, poison in the blood, and an overdose of strong medicine. The most prominent symptoms noticed from these causes, are great muscular debility and a feeble and rapid pulse, depending entirely on the heart.

A gradual or sudden cessation of respiration will cause death. The gradual failure of respiration may be produced by anything obstructing the air passages, as tumors, false membrane, etc. Inflammation of the lungs may result in death in this way. Where the respirations are checked suddenly, there will be violent efforts at breathing, followed (we are told by good authority,) by brief periods of remarkable clearness of mind and pleasant sensations, finally merging into an unconscious condition, or irregular action of the muscles; the face is blue and swollen, the eyes protruding, and soon the heart stops.

A man should die as unconscious of his death as he is of his birth. We all sleep through the processes of birth, and feel the painful or pleasant impressions of this life only after awakening.

Death is a painless process, and when the cycle of life is completed, the living being sleeps into it. The natural and easy descent into oblivion is the sequel of health; it is the happy death engrafted on the perfect life. Death should be divested of all fear, sorrow and suffering, and should come to us at last as a quiet sleep.

Dr. Richardson says: "If you ask me what proof there is of the possibility of such a consummation, I point to our

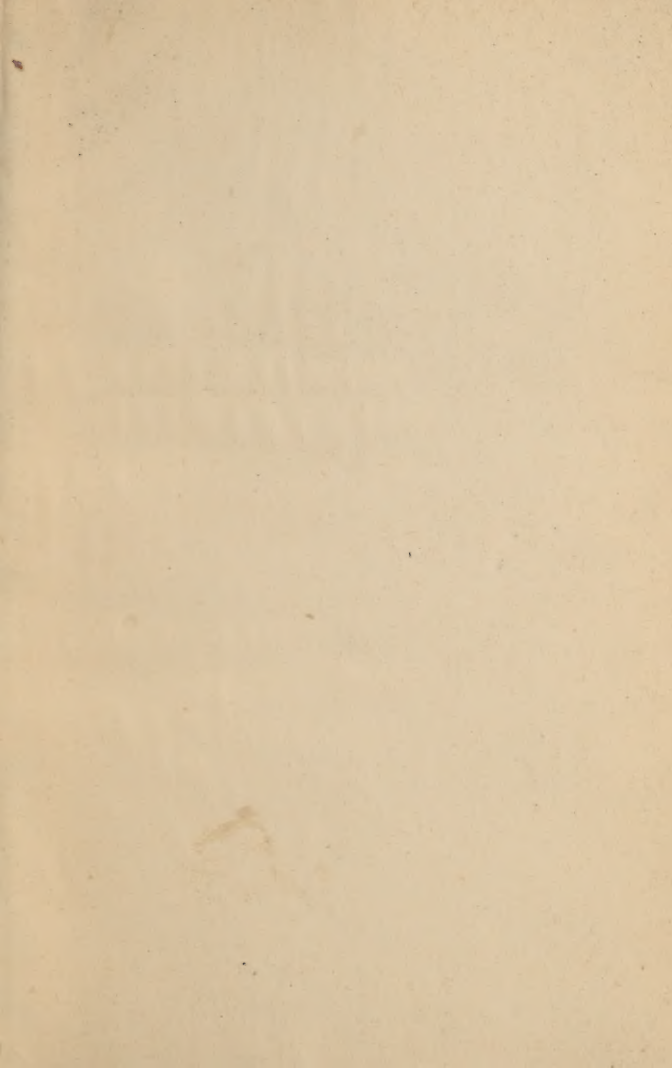
knowledge of the natural phenomena of one form of dissolution, revealed to us even now, in perfect, though exceptional illustration. We have seen nature, in rare instances, vindicating herself despite the social opposition to her, and showing how tenderly, how soothingly, how like a mother with her foot on the cradle, she would, if she were permitted, rock us all gently out of the world. How, if the free will with which she has armed us were brought into accord with her designs, she would give us the riches, the beauties, the wonders of the universe for our portion, so long as we could receive and enjoy them, and at last would gently withdraw us from them, sense by sense, with such perception that the pain of the withdrawal would be unfelt, and, indeed, unknown."

A few times in the last twenty years, I have witnessed a perfect death. No pain, no sorrow, no ambition, no longing to linger on the shores of Time, but a desire to sleep and not to dream, until the animal life no longer sustains the physical forces, and the closing act of life appears at the appointed hour. When we think of the change as one of comfort and ease, the sharpness of the sting is removed, and we think of the joys and of the brightness of heaven.

When nature has no chance to kindly

perform her last earthly work, but is badly interrupted, we are led to wonder and weep at the injustice. We are born for a higher destiny than that of earth. There is a realm whose beauties never fade. The beautiful spirits of earth, with their bloom, will rest there from the gaze of human eyes. The hand of death can be seen everywhere; his voice can be heard in every sweep of the wind. Faith lifts the veil and discloses the invisible. Death is a power that awakens into new life forms well known, but holier and lovelier than when we knew them here. Death brings a sorrow from which we refuse to be divorced. We should feel that when it does its perfect work, it is the most glorious earthly change. Death is a part of the scheme of life, and comes after the natural term of life is over.

May we walk in the path of the just; may we grow happier every day; may we grow brighter and brighter, until at last we can enter into the noontide splendors of the heavenly glory.



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